DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO
ATTENTION OF:

1 July, 2013

Regulatory Division

Re: NCIRT Review and USACE Approval of the Norkett Branch Draft Mitigation Plan; SAW 2012-01082

Mr. Michael Ellison
North Carolina Ecosystem Enhancement Program
1652 Mail Service Center
Raleigh, NC 27699-1652

Dear Mr. Ellison:

The purpose of this letter is to provide the North Carolina Ecosystem Enhancement Program (NCEEP) with all comments generated by the North Carolina Interagency Review Team (NCIRT) during the 30-day comment period for the Norkett Branch Draft Mitigation Plan, which closed on 13 June, 2013. These comments are attached for your review.

Based on our review of these comments, we have determined that no major concerns have been identified with the Draft Mitigation Plan. However, the minor issues with the Draft as discussed in the attached comment memo must be addressed in the Final Mitigation Plan.

The Final Mitigation Plan is to be submitted with the Preconstruction Notification (PCN) Application for Nationwide permit approval of the project along with a copy of this letter and a summation of the addressed comments. If it is determined that the project does not require a Department of the Army permit, you must still provide a copy of the Final Mitigation Plan, along with a copy of this letter, to the appropriate USACE field office at least 30 days in advance of beginning construction of the project. Please note that this approval does not preclude the inclusion of permit conditions in the permit authorization for the project, particularly if issues mentioned above are not satisfactorily addressed. Additionally, this letter provides initial approval for the Mitigation Plan, but this does not guarantee that the project will generate the requested amount of mitigation credit. As you are aware, unforeseen issues may arise during construction or monitoring of the project that may require maintenance or reconstruction that may lead to reduced credit.

Thank you for your prompt attention to this matter, and if you have any questions regarding this letter, the mitigation plan review process, or the requirements of the Mitigation Rule, please call me at 919-846-2564.

Sincerely,

Tyler Crumbley
Regulatory Specialist

Enclosures

Electronic Copies Furnished:

NCIRT Distribution List
CESAW-RG/Wicker
CESAW-RG-A/Kichefski
Jeff Jurek, NCEEP
Paul Wiesner, NCEEP

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO
ATTENTION OF:

CESAW-RG/Crumbley 14 June, 2013

MEMORANDUM FOR RECORD

SUBJECT: Norkett Branch- NCIRT Comments During 30-day Mitigation Plan Review

Purpose: The comments and responses listed below were posted to the NCEEP Mitigation Plan Review Portal during the 30-day comment period in accordance with Section 332.8(g) of the 2008 Mitigation Rule.

NCEEP Project Name: Norkett Branch Stream Mitigation Site, Union County, NC

USACE AID#: SAW-2012-01082
NCEEP #: 95360

30-Day Comment Deadline: 13 June, 2013

1. *Eric Kulz, NCDWQ, 30 May, 2013*:

- I discussed this project with Alan Johnson at the MRO, and his comments are also included. We were kind of concerned about the size of the riffle material proposed for the smaller tribs. It was hard to tell exactly, but it looked like they are proposing riffle gravel/cobble salvaged from elsewhere on the site for the riffles in UT2 and UT2A (as opposed to "chunky riffles"), which was indicated on Figure 5.1 to be in the 6" diam. range. The existing D50 for UT2 is 0.2", and the D84 is 1.8" (no pebble count data for UT2A) so that does sound a little large. The largest D50 found at the site is about 0.3" and the D 84 is 1.12". So the proposed riffle material does seem a bit large for the smaller tribs. No pebble count data were identified for the reference reaches. We acknowledge that research done/observations made on small natural (e.g. not restored) Slate Belt streams by both EEP and DWQ over the years suggest that surface flows in these streams (and even larger 2nd/3rd order streams), naturally dry up, often leaving pools with water and riffles with sub-surface/hyporheic flow only. However, we recommend that you consider sizing the riffle materials down in the smaller tribs, and seed with coarse sand/fine gravel as well to try to maintain flow over the riffles rather than through.
- I also have a question regarding the substrate for the SPSC, which proposes a substrate material of sand and wood chips. As occurs in bioretention cells, we would expect that

the wood chips decompose and subsidence occurs. Will this result in undercutting and/or undermining of the rock structures comprising the step pools, thus limiting their function?

- Finally, Alan indicated there was a cattle "wallow" in a wetland on UT 2. How will this area be addressed, and are there other areas where concentrated flow from areas where livestock congregate currently occur? How will these be addressed (if present)?

NCEEP Response: *Paul Wiesner, 3 June, 2013*: These comments are in response to Eric Kulz's comments dated 5/30/13: The riffle details on Sheet 5.1 were meant to indicate a 6-inch deep layer of substrate, not a 6" particle size class, for the tributaries. Norkett Branch will have a 12-inch deep layer of substrate. The wording on the details will be revised for the final mitigation plan to make this more clear. The 6-inch deep layer of tributary riffle substrate will be comprised of native material found on site, and so will include the 0.2" to 1.2" range coarse substrate sizes sampled in the existing streams but will also have larger rocks as well as on site soils and sands mixed in. Based on our experience with other project sites in the slate belt, we have been able to successfully harvest coarse material on site for riffle construction during the necessary channel and floodplain grading activities. The well-graded mix comprised of a wide range of small to large particles seems to work best to keep water on the surface. This well-graded mix riffle is in contrast to the earlier generation of structures built from one consistent class of quarry stone. The SPSC woodchip/sand mixture adheres to the standard design detail and specification for this type of BMP. Our understanding was that the IRT wanted to implement two different BMPs side-by-side on the site for long term evaluation. We expect that as sediment is filtered by the BMP and settles within the channel, this collected volume could offset wood ship subsidence. There is an existing wallow in Wetland I (wetlands are labeled on Figure 7 of the report). This area is also shown on Sheet 2.14 of the plan set, in the right floodplain near proposed Station 311+40. The area will be placed under protection with a conservation easement, planted, and fenced out from future cattle access. We think that this area will stabilize over time with cattle exclusion and planting. Other areas where concentrated flow enters the floodplain from outside the conservation easement, such as in the left floodplain near Station 301+50 (Sheet 2.12) or Station 310+50 (Sheet 2.14) will benefit from the proposed vernal pool installation. Vernal pools will be approximately 12" to 18" deep and will intercept agricultural runoff for storage and treatment prior to the runoff reaching the project streams.

2. *T. Crumbley and T. Tuqwell, USACE, 12 June, 2013*:

- Pg. 27-28, and Plan Sheets: Please provide a discussion on the impacts to and protection measures for existing wetlands (high visibility fencing, avoidance). Impacts to existing wetlands need to be accounted for in the final mit plan and ensuing NWP application, including explanations on how the impacts/losses will be replaced.
- Pg. 35, For increased credit on buffers wider than standard width, please provide an additional discussion and the proposed credit amounts to be included in the final mitigation plan on a figure that demonstrates where the wider buffers will be located.
- Pg. 36, As per the correspondence provided from previous IRT review (email dated 3, April, 2013), we agree with the proposed BMP credit calculations, but would like to

remind NCEEP that this approach was conducted and reviewed only for this particular site and any future proposals will be reviewed on a case-by-case basis.

- Pg. 53, Sec. 11.0, The mitigation plan states: "If all performance criteria have been successfully met and two bankfull events have occurred during separate years, Wildlands may propose to terminate stream and/or vegetation monitoring." This statement must be amended to state that this may only be proposed after year 5, and IAW the Early Closure Provision in the EEP Monitoring Requirements and Performance Standards for Stream and/or Wetland Mitigation, Nov. 7th, 2011.
- Pg. 54, Sec. 11.1.2- The As-Built survey should include a longitudinal profile.

July 1, 2013

Mr. Paul Wiesner
NC Ecosystem Enhancement Program
5 Ravenscroft Drive, Suite 102
Asheville, NC 28801

Subject: Response to IRT Comments and Final Mitigation Plan Submittal
Norkett Branch Stream Mitigation Site
Yadkin River Basin – CU# 03040105– Union County
USACE AID# SAW-2012-01082
EEP Project ID No. 95360
Contract # 004673

Dear Mr. Wiesner:

On July 1, 2013, Wildlands Engineering (Wildlands) received a Memorandum for Record documenting the IRT's comments during the 30-day comment period for the above-referenced mitigation site. This letter documents our responses to these comments. We are enclosing eight (8) copies of the Final Mitigation Plan (report and plan set) and the Pre-Construction Notice (PCN), with one original of the performance bond to satisfy Task 30 of the contract scope. Three CD's of the electronic files for the Final Mitigation Plan and PCN are also enclosed.

We have reviewed the IRT comments documented below and revised the Mitigation Plan as noted.

5/30/2013 13:38:55 from Eric Kulz: NCDWQ

1. *I discussed this project with Alan Johnson at the MRO, and his comments are also included. We were kind of concerned about the size of the riffle material proposed for the smaller tribs. It was hard to tell exactly, but it looked like they are proposing riffle gravel/cobble salvaged from elsewhere on the site for the riffles in UT2 and UT2A (as opposed to "chunky riffles"), which was indicated on Figure 5.1 to be in the 6" diam. range. The existing D50 for UT2 is 0.2", and the D84 is 1.8" (no pebble count data for UT2A) so that does sound a little large. The largest D50 found at the site is about 0.3" and the D 84 is 1.12". So the proposed riffle material does seem a bit large for the smaller tribs. No pebble count data were identified for the reference reaches. We acknowledge that research done/observations made on small natural (e.g. not restored) Slate Belt streams by both EEP and DWQ over the years suggest that surface flows in these streams (and even larger 2nd/3rd order streams), naturally dry up, often leaving pools with water and riffles with sub-surface/hyporheic flow only. However, we recommend that you consider sizing the riffle materials down in the smaller tribs, and seed with coarse sand/fine gravel as well to try to maintain flow over the riffles rather than through.*

   The riffle details on Sheet 5.1 were meant to indicate a 6-inch deep layer of substrate, not a 6" particle size class. The notes on the constructed riffle details on Sheet 5.1 of the plan set have been revised to make this more clear.

The 6-inch deep layer of tributary riffle substrate will be comprised of native material found on site, and so will include the 0.2" to 1.2" range coarse substrate sizes sampled in the existing streams but will also have larger rocks as well as on site soils and sands mixed in. Based on our experience with other project sites in the slate belt, we have been able to successfully harvest coarse material on site for riffle construction during the necessary channel and floodplain grading activities. The well-graded mix comprised of a wide range of small to large particles seems to work best to keep water on the surface. This well-graded mix riffle (attached photos shows surface flow over stone mix riffles) is in contrast to the earlier generation of structures built from one consistent class of quarry stone (attached photo shows subsurface flow through quarry stone riffle).

Photos 1 & 2: Examples of Riffle Flow over top of Well-Graded On-Site Riffle Material

Photo 3: Example of Subsurface Riffle Flow through Quarry Stone Riffle

2. *I also have a question regarding the substrate for the SPSC, which proposes a substrate material of sand and wood chips. As occurs in bioretention cells, we would expect that the wood chips decompose and subsidence occurs. Will this result in undercutting and/or undermining of the rock structures comprising the step pools, thus limiting their function?*

The SPSC woodchip/sand mixture adheres to the standard design detail and specification for this type of BMP. Our understanding was that the IRT wanted to implement two

different BMPs side-by-side on the site for long term evaluation. We expect that as sediment is filtered by the BMP and settles within the channel, this collected volume could offset wood ship subsidence. No revision was made to the Final Mitigation Plan.

3. *Finally, Alan indicated there was a cattle "wallow" in a wetland on UT 2. How will this area be addressed, and are there other areas where concentrated flow from areas where livestock congregate currently occur? How will these be addressed (if present)?*

   There is an existing wallow in Wetland I (wetlands are labeled on Figure 7 of the report). This area is also shown on Sheet 2.14 of the plan set, in the right floodplain near proposed Station 311+40. The area will be placed under protection with a conservation easement, planted, and fenced out from future cattle access. We think that this area will stabilize over time with cattle exclusion and planting. Other areas where concentrated flow enters the floodplain from outside the conservation easement, such as in the left floodplain near Station 301+50 (Sheet 2.12) or Station 310+50 (Sheet 2.14) will benefit from the proposed vernal pool installation. Vernal pools will be approximately 12" to 18" deep and will intercept agricultural runoff for storage and treatment prior to the runoff reaching the project streams. Section 9.5.1 of the Mitigation Plan report text ("In-Stream Structures and Other Construction Elements," last paragraph on page 52 continuing to page 53) has been updated with this discussion of vernal pools.

6/12/2013 15:59:39 from Crumbley and Tugwell: USACE

4. *Pg. 27-28, and Plan Sheets: Please provide a discussion on the impacts to and protection measures for existing wetlands (high visibility fencing, avoidance). Impacts to existing wetlands need to be accounted for in the final mit plan and ensuing NWP application, including explanations on how the impacts/losses will be replaced.*

   Section 6.1 (last paragraph on page 27 continuing to page 28) of the Mitigation Plan report has been revised and summarizes the impacts and loss replacements to existing jurisdictional wetlands as follows:

   > Impacts to existing wetland areas were avoided to the extent possible during the design phase, as shown in Figure 10. Small areas of excavation will be required on the edge of Wetlands A and G, totaling 0.006 acres. This represents impacts to less than 1% of the site's wetlands. Over time, it is expected that the restored floodplain hydrology will allow additional wetland areas to form.
   >
   > In addition, the restored Norkett Branch Reach 1 will meander through an existing wetland area. 0.35 acres of existing wetlands in Wetland F are located within the proposed stream banks and will be converted from wetland to stream. The existing channel is a ditch located immediately adjacent to Wetland F. This ditch will be filled and converted into a wetland, thereby offsetting the 035-acre loss of wetland. The 0.35 acres of wetland located in the proposed stream banks will be classified as a permanent impact on the PCN application to the USACE. The converted wetlands will be monitored annually with photographs. The proposed stream restoration is expected to improve hydrology in the remaining Wetland F area and the adjacent

proposed converted wetland area. Riparian plantings will further enhance the vegetation in the Wetland F and adjacent proposed converted wetland area.

Safety fencing will be installed at the perimeter of existing wetlands to be protected. Sheets 2.1-2.25 of the plan set have been revised to show the locations of this fencing at the perimeter of existing wetlands.

These impacts are accounted for on the enclosed NWP PCN form in Section C-2 of the "Proposed Impacts Inventory."

5. *Pg. 35, For increased credit on buffers wider than standard width, please provide an additional discussion and the proposed credit amounts to be included in the final mitigation plan on a figure that demonstrates where the wider buffers will be located.*

After talking with Mr. Todd Tugwell about the intent of the Non-Standard Buffer Width methodology and reviewing the draft guidance, Wildlands has removed the request for additional credits from the Mitigation Plan and will proceed with the credits proposed in Table 11 (page 35) of the Mitigation Plan. Section 8.1 (page 35, first paragraph) of the Mitigation Plan report has been revised to delete the reference to increased credit on buffers wider than standard width.

6. *Pg. 36, As per the correspondence provided from previous IRT review (email dated 3, April, 2013), we agree with the proposed BMP credit calculations, but would like to remind NCEEP that this approach was conducted and reviewed only for this particular site and any future proposals will be reviewed on a case-by-case basis.*

Wildlands has discussed this with the EEP Project Manager, and EEP understands that the BMP credit calculations contained in this Mitigation Plan have been awarded based on this particular site only. No revision was made to the Final Mitigation Plan.

7. *Pg. 53, Sec. 11.0, The mitigation plan states: "If all performance criteria have been successfully met and two bankfull events have occurred during separate years, Wildlands may propose to terminate stream and/or vegetation monitoring." This statement must be amended to state that this may only be proposed after year 5, and IAW the Early Closure Provision in the EEP Monitoring Requirements and Performance Standards for Stream and/or Wetland Mitigation, Nov. 7th, 2011.*

Section 11.0 (page 54, first paragraph) of the Mitigation Plan has been revised as follows: If all performance criteria have been successfully met and two bankfull events have occurred during separate years, Wildlands may propose to terminate stream and/or vegetation monitoring after Year 5, in accordance with the Early Closure Provision in the EEP Monitoring Requirements and Performance Standards for Stream and/or Wetland Mitigation (November 7, 2011).

8. *Pg. 54, Sec. 11.1.2- The As-Built survey should include a longitudinal profile.*

Section 11.1.2 (page 55) has been revised as follows: The as-built survey will include a longitudinal profile for the baseline monitoring report. Longitudinal profile surveys will not

be conducted during the seven year monitoring period unless other indicators during the annual monitoring indicate a trend toward vertical and lateral instability.

<u>Note 2 on Tables 25A (page 58) and Table 25B (page 59) have been revised to include a longitudinal survey in the baseline monitoring phase.</u>

If you have any questions, please contact me at 704-332-7754 x 106 or via email at ereinicker@wildlandseng.com.

Sincerely,

Emily G. Reinicker, PE, CFM
Project Manager

Enclosures:
8 copies Final Mitigation Plan with IRT Comment/ Response Letter
8 copies PCN (includes Categorical Exclusion and Jurisdictional Determination)
3 CD- electronic copies (.pdf) of the Final Mitigation Plan and PCN files
1 performance bond

MITIGATION PLAN

Norkett Branch Stream Mitigation Site
Union County, NC
DENR Contract No. 004673
EEP ID No. 95360

Yadkin River Basin
HUC 03040105

Prepared for:

NC Department of Environment and Natural Resources
Ecosystem Enhancement Program
1652 Mail Service Center
Raleigh, NC 27699-1652

July 3, 2013

MITIGATION PLAN

Norkett Branch Stream Mitigation Site
Union County, NC
DENR Contract No. 004673
EEP ID No. 95360

Yadkin River Basin
HUC 03040105

Prepared for:

NC Department of Environment and Natural Resources
Ecosystem Enhancement Program
1652 Mail Service Center
Raleigh, NC 27699-1652

Prepared by:

Wildlands Engineering, Inc.
1430 South Mint Street, Suite 104
Charlotte, NC 28203
Phone – 704-332-7754

Emily Reinicker, PE, CFM
ereinicker@wildlandseng.com

July 3, 2013

EXECUTIVE SUMMARY

Wildlands Engineering, Inc. (Wildlands) is completing a full-delivery project for the North Carolina Ecosystem Enhancement Program (EEP) to restore and enhance a total of 7,661 existing linear feet (LF) of perennial stream in Union County, NC. The streams proposed for restoration and enhancement include Norkett Branch, a first order stream, two unnamed first order tributaries to Norkett Branch (UT1 and UT2), and two intermittent tributaries to Norkett Branch (UT2A and UT3). A storm water BMP is proposed to treat water quality on the non-jurisdictional headwaters of UT3 and an adjacent ephemeral drainage feature. The project is being completed to provide stream mitigation units (SMUs) in the Yadkin River Basin. Buffer restoration will also take place but is not intended for mitigation credit at this time.

The Norkett Branch Stream Mitigation Site is located within the Middle Lanes Creek watershed of the Yadkin River basin. The site's watershed is located within Hydrologic Unit Code (HUC) 03040105081020 which was identified as a targeted local watershed in EEP's 2009 Lower Yadkin- Pee Dee River Basin Restoration Priority (RBRP) plan. This RBRP plan identifies agricultural practices and runoff as the probable major sources of water quality impairment in the Middle Lanes Creek watershed. The 2008 DWQ Basinwide Water Quality Report lists turbidity and nutrient concentrations of nitrogen and phosphorus as specific concerns in the Rocky River watershed portion of the Yadkin- Pee Dee River basin. Other pollutants of concern cited in this report are fecal coliform bacteria, iron, and copper. The agricultural stressors and pollutants will specifically be addressed by the proposed site design. Cattle and agricultural practices will be excluded from the stream channels and riparian buffer areas, eroding banks will be stabilized, and vegetated buffers will filter nitrogen, phosphorus, and fecal coliform pollutants from agricultural runoff.

The proposed project will provide numerous ecological benefits within the Yadkin River Basin. While many of these benefits are limited to the Norkett Branch Stream Mitigation Site project area, others, such as pollutant removal, reduced sediment loading, and improved aquatic and terrestrial habitat have more far-reaching effects. The design will not result in adverse impacts to wetlands.

This mitigation plan has been written in conformance with the requirements of the following:

- Federal rule for compensatory mitigation project sites as described in the Federal Register Title 33 Navigation and Navigable Waters Volume 3 Chapter 2 Section § 332.8 paragraphs (c)(2) through (c)(14).
- NCDENR Ecosystem Enhancement Program In-Lieu Fee Instrument signed and dated July 28, 2010.

These documents govern EEP operations and procedures for the delivery of compensatory mitigation.

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1.0 Restoration Project Goals and Objectives

The Norkett Branch Stream Mitigation Site is located within the Middle Lanes Creek watershed of the Yadkin River basin. The site's watershed is located within Hydrologic Unit Code (HUC) 03040105081020 which was identified as a targeted local watershed in EEP's 2009 Lower Yadkin- Pee Dee River Basin Restoration Priority (RBRP) plan. This RBRP plan identifies agricultural practices and runoff as the probable major sources of water quality impairment in the Middle Lanes Creek watershed. The 2008 DWQ Basinwide Water Quality Report lists turbidity and nutrient concentrations of nitrogen and phosphorus as specific concerns in the Rocky River watershed portion of the Yadkin- Pee Dee River basin. Other pollutants of concern cited in this report are fecal coliform bacteria, iron, and copper. The project reaches flow off-site, directly into Lanes Creek, which is included on the NCDWQ 303d list of impaired streams. The section of Lanes Creek downstream of the project site is listed as impaired due to turbidity (NC DWQ, 2012).

The agricultural stressors and pollutants will specifically be addressed by the proposed site design. The major goals of the proposed stream mitigation project are to provide ecological and water quality enhancements to the Norkett Branch, Rocky River and Yadkin River Basins while creating a functional riparian corridor at the site level and restoring a Piedmont Bottomland Forest as described by Schafale and Weakley (1990). Specific goals include:

- *Improve aquatic and terrestrial habitat within the riparian corridor and provide habitat corridor extension from adjacent downstream forested habitat.* By restoring appropriate channel cross-section and profile, including riffle and pool sequences, coarse substrate zones for macroinvertebrates and deep pool habitat for fish will also be restored. Introduction of large woody debris, rock structures, brush toe, and native stream bank vegetation will provide additional habitat and cover for both fish and macroinvertebrates. Adjacent buffer areas will be restored by planting native vegetation which will provide habitat and forage for terrestrial species. These areas will be allowed to receive more regular inundating flows, and vernal pools may develop over time increasing habitat diversity. A watershed approach, restoring riparian corridor functions on multiple interconnected tributaries as well as treating agricultural drainage from headwater features in BMPs, will allow for large-scale riparian corridor connectivity.
- *Improve additional water quality aspects within stream channels on site.* Riffle/pool sequences will be restored to provide re-aeration for oxygen levels to be maintained in the perennial reaches. Creation of deep pool zones will lower temperature, helping to maintain dissolved oxygen concentrations. Establishment and maintenance of riparian buffers will create long-term shading of the stream to minimize thermal heating. Water quality BMPs situated in the headwaters of jurisdictional streams will treat agricultural runoff before it reaches project stream reaches.
- *Decrease sediment inputs to the stream channels and decrease turbidity in receiving Lanes Creek.* Cattle will be fenced out of the riparian corridor, eliminating bank trampling. Sediment input from eroding stream banks will be reduced by installing bioengineering and in-stream structures while creating a stable channel form using geomorphic design principles. Sediment from off-site sources will be captured by deposition on restored floodplain areas where native vegetation will slow overland flow velocities. By allowing

for more overbank flooding and by increasing channel roughness, in-channel velocities can be reduced. This will lower bank shear stress and decrease bank erosion.

- *Decrease phosphorus, nitrogen, and fecal coliform inputs to the stream channels.* Nitrogen and phosphorus chemical fertilizers, pesticides, and cattle waste will be decreased by buffering adjacent agricultural operations from the restored channels. Cattle will be fenced out to eliminate in-channel fecal pollution. Off-site nutrient input will be absorbed on-site by filtering flood flows through restored floodplain areas, water quality BMPs, and vernal pools positioned to treat concentrated overland flow. Flood flows will be allowed to disperse through native vegetation across the re-connected floodplain. Increased surface water residency time will provide contact treatment time and groundwater recharge potential.

2.0 Project Site Location and Selection

2.1 Directions to Project Site

The Norkett Branch Stream Mitigation Site is located in the southeastern portion of Union County, NC, as shown in Figure 1. The site is approximately ten miles southeast of the City of Monroe and approximately five miles north of the South Carolina state line. The proposed project is located in active cattle pasturelands and agricultural production fields, surrounded by woods and agriculture.

From Charlotte, NC, take US-74 south approximately 25 miles to US-601 in Monroe, NC. Turn right on US-601 South and continue approximately 10.5 miles and then turn left onto Landsford Road. Travel approximately 3 miles and take a left onto Philadelphia Church Road. Travel 2 miles and cross over UT2 to Norkett Branch. The project site is located upstream and downstream of the Philadelphia Church Road stream crossing.

2.2 Site Selection and Project Components

The site has been selected to provide stream mitigation units (SMUs) in the Yadkin River Basin. The site was selected based on the current degraded condition of the site's streams and the potential for functional restoration described in Section 1.0. Credit determinations are presented in Section 5.0.

The streams proposed for restoration and enhancement include Norkett Branch and four unnamed tributaries: UT1, UT2, UT2A, and UT3, as illustrated on Figure 3. Norkett Branch includes two reaches based on drainage area: Reach 1 is located upstream of the confluence with UT2, and Reach 2 is located downstream of UT2. A storm water BMP is proposed to treat water quality on the non-jurisdictional headwaters of UT3 and an adjacent ephemeral drainage feature. Norkett Branch ultimately flows into Lanes Creek which is part of the Yadkin River Basin. Photographs of the project site are included in Appendix 1.

3.0 Site Protection Instrument

The Norkett Branch Stream Mitigation Site is located on seven parcels in Union County, NC. Options to purchase conservation easements, to be held by the State of North Carolina, will be recorded for a total of 31.2 acres. The land required for construction, management, and stewardship of the mitigation project includes portions of the parcels listed in Table 1. A copy of the land protection instrument is included in Appendix 8. Figure 3 depicts the proposed conservation easement areas.

Table 1. Site Protection Instrument
Norkett Branch Stream Mitigation Site

Landowner	PIN	County	Site Protection Instrument	Deed Book and Page Number	Acreage to be Protected
Marie S. Autry	03060001A	Union	Conservation Easement	TBD	0.8
John Harley Autry Sr. & Peggy S. Autry	03081007D	Union	Conservation Easement	TBD	6.3
The Cox Farms Irrevocable Trust	03081010	Union	Conservation Easement	TBD	13.7
Lane Haigler & Kay Autry Haigler	03081014	Union	Conservation Easement	TBD	0.5
Lane Haigler & Kay Autry Haigler	03081013	Union	Conservation Easement	TBD	3.5
Lane Haigler & Kay Autry Haigler	03081007C	Union	Conservation Easement	TBD	2.7
Marion Cox, Delano Cox, Jon Cox Sr, and Ruth Cox	03081012	Union	Conservation Easement	TBD	3.7

All site protection instruments require 60-day advance notification to the Corps and the State prior to any action to void, amend, or modify the document. No such action shall take place unless approved by the State.

4.0 Baseline Information –Project Site and Watershed Summary

Table 2 presents the project information and baseline watershed information. The watershed areas were delineated on the USGS 7.5-minute topographic quadrangles and are shown on Figure 2.

Table 2. Project and Watershed Information
Norkett Branch Stream Mitigation Site

Project County	Union County
Project Area (acres)	31.2
Project Coordinates	34°52'47.56"N, 80°22'9.19"W
Physiographic Region	Carolina Slate Belt of the Piedmont Physiographic Province
Ecoregion	Piedmont – Carolina Slate Belt
River Basin	Yadkin
USGS HUC (8 digit, 14 digit)	03040105, 03040105081020
NCDWQ Sub-basin	03-07-14

Reaches	Norkett Branch Reach 1	Norkett Branch Reach 2	UT1	UT2	UT2A	UT3
Drainage Area (acres)	1490	2034	48	457	72	28
Drainage Area (square miles)	2.3	3.2	0.08	0.72	0.11	0.04
CGIA Land Use Classification						
Developed	-	-	-	-	-	-
Forested/Scrubland	46%	43%	77%	30%	3%	66%
Agriculture/Managed Herb.	53%	56%	22%	69%	96%	33%
Open Water	-	-	-	-	-	-
Watershed Impervious Cover	<1% [1]	<1% [1]	<1% [1]	<1% [1]	<1% [1]	<1% [1]

[1] No impervious land use is present within the project watershed per the CGIA Land Use Classification data set.

4.1 *Watershed Historical Land Use and Development Trends*

The Norkett Branch watershed is located in rural countryside approximately ten miles southeast of Monroe, NC. Land use within the Norkett Branch watershed is historically rural and dominated by agriculture and forest and is approximately 43% forested, 29% managed herbaceous cover, and 28% cultivated land.

A review of historical aerials from 1961, 1969, 1976, 1983, 1989, 1993, 1999, 2005, 2006, and 2008 verified that land use on the project site and in the watershed has remained relatively consistent for the past 51 years (historic aerial photos are included in Appendix 5).

There are no signs of impending land use changes or development pressure evident in the Norkett Branch watershed. Mr. Lee Jenson, the Union County Land Use Administrator, reviewed the site and watershed conditions during a telephone interview and confirmed that the historic agricultural and low density residential land uses in the watershed are expected to continue through year 2025 projections, with no indications of land use shifts in the long term. No transportation projects, major roadway improvements, or significant development are planned for the area (Jenson, 2012). The Conservation Easement will discourage future development in the immediate riparian zone of the onsite streams.

4.2 *Watershed Assessment*

On September 28, 2012, Wildlands conducted a watershed windshield assessment to verify current land uses observed from the aerial photography and to identify potential stressors. During the watershed assessment, stream corridors were observed at road crossings throughout the watershed upstream of the project reaches. Current land use practices and pond storage within the watershed were confirmed to match the coverage as shown on existing aerial photography.

Consistent with the aerial photography, watersheds to Norkett Branch and UT2 upstream of the project site consist of primarily agricultural land, pasture, and forest. No recent disturbances were noted beyond land tillage associated with agriculture operations. The project's watershed is relatively small and consists of Norkett Branch and two unnamed tributaries to Norkett Branch. Portions of Norkett Branch and the two tributaries are

predominantly forested. However, a greater portion of the watershed streams have little to no buffer and have been impacted from current or past agricultural activities including straightening and ditching. These streams run through existing pasture and agricultural land.

Several small ponds were observed above the Norkett Branch project reach. These ponds allow for sediment to settle out and contribute to an overall reduction in sediment delivered to the project stream. There is an existing agricultural road crossing with a CMP culvert immediately above the proposed limits of work on Norkett Branch. The existing pipe is ponding water above the crossing allowing sediment to settle out before reaching the upstream limits of the project reach. Based on watershed conditions observed during the assessment, it appears that the project streams have low sediment supply primarily due to small farm ponds and farm culverts. A relatively large pond, approximately 5.8 acres in size, is located upstream of UT2 that significantly affects flow and sediment reaching this project reach. The pond provides significant attenuation through the 25-year storm event for 154 acres of the UT2 watershed. The effect of this storage on the effective discharge of UT2 is further discussed in Section 5.5.

The USEPA's STEPL pollutant loading watershed model was used to estimate sediment load delivered to the project reach on Norkett Branch from the watershed. The model uses the revised Universal Soil Loss Equation (RUSLE), rainfall data for the county, watershed stream conditions, and land use data to estimate sediment load from the watershed. The model estimates that the watershed supplies 904 tons of sediment per year to the upstream project limits on Norkett Branch. However, backwater effects immediately upstream of the project site significantly slow velocity and allow sediment to settle out prior to reaching the project site. Therefore, sediment load delivery to the site is expected to be minimal.

The pond upstream of the UT2 project reach captures nearly all of the sediment from this watershed. UT1, UT2A, and UT3 are headwater streams with no substantial contributing sediment load.

4.3 Physiography, Geology, and Soils

The Norkett Branch Mitigation site is located in the Carolina Slate Belt of the Piedmont physiographic province. The Piedmont is characterized by gently rolling, well-rounded hills with long low ridges, with elevations ranging anywhere from 300 to 1500 feet above sea level. The Carolina Slate Belt consists of heated and deformed volcanic and sedimentary rocks. Approximately 550 to 650 million years ago, this region was the site of a series of oceanic volcanic islands (NCGS, 2012). The belt is known for its numerous abandoned gold mines and prospects. The underlying geology of the proposed restoration site is mapped as late Proterozoic to Cambrian age (900 to 500 million years in age) metamudstone and meta-argillite (CZmd2) of the Cid Formation (NCGS, 1985). The CZmd2 unit is described as thin to thick bedded and interbedded with metasandstone, metaconglomerate, and metavolcanic rock.

The geologic composition and structure of the region can alter baseflow in streams. The Carolina Slate Belt is characterized by low baseflow due to low yield of water from the rocks in the Slate Belt (Griffith et. al. 2002). During summer months stream hydrology may often be reduced to ponding water in pools and dry riffles. Small areas of shallow bedrock serve as grade control sporadically in the project area streams.

Soil mapping units are based on the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soil Survey for Union County. The floodplain areas of the

proposed project are mapped by the Union County Soil Survey. Soils in the project area floodplain are primarily mapped as Badin channery silt loam, Cid channery silt loam, Goldston-Badin complex, and Secrest-Cid complex. These soils are described below in Table 3. A soils map is provided in Figure 5.

Table 3. Floodplain Soil Types and Descriptions
Norkett Branch Stream Mitigation Site

Soil Name	Location	Description
Badin channery silt loam, 2-8% slopes	Mapped along the majority of UT2A, UT3, and UT4. Minor areas of this unit are present along the lower portion of Norkett Branch and portions of UT2 Reach 1 and 2.	Badin soils are found on gently sloping to steep uplands in the Piedmont. They are moderately deep, well-drained soils that are typically not flooded or ponded.
Badin channery silt clay loam, 2-8% slopes	Small amount of this unit is mapped along the eastern edge of UT2 Reach 1.	Badin soils are found on gently sloping to steep uplands in the Piedmont. They are moderately deep, well-drained soils that are typically not flooded or ponded.
Cid channery silt loam, 1-5% slopes	Mapped along much of UT2 Reaches 1-3 and Norkett Branch Reach 2.	Cid soils are found on uplands and interfluves. They are moderately well-drained with moderate shrink-swell potential. This soil unit it typically not flooded or ponded.
Secrest-Cid complex, 0-3% slopes	Found along Norkett Branch Reach 1 and UT1.	Secrest soils typically comprise 65% of the map unit; Cid 20%. Secrest soils are moderately well-drained with moderately low permeability, found on interfluves and uplands.
Source: Union County Soil Survey, USDA-NRCS, http://efotg.nrcs.usda.gov		

4.4 *Valley Classification*

Topography, as indicated on the Marshville USGS 7.5-minute topographic quadrangle, shows moderately sloped areas draining north towards Leonard Morgan Road (Figure 4). The Norkett Branch project area is bound by broad valleys and gentle elevation relief, typical of the region. The surrounding fluvial and morphological landforms do not fit neatly into any valley type according to the Rosgen classification system (Rosgen, 1996); therefore the valley was not classified according to that system.

4.5 *Surface Water Classification and Water Quality*

On August 14 and 16, 2012, Wildlands investigated on-site jurisdictional waters of the U.S. using the U.S. Army Corps of Engineers (USACE) Routine On-Site Determination Method. This method is defined in the 1987 Corps of Engineers Wetlands Delineation Manual and subsequent Eastern Mountain and Piedmont Regional Supplement. Determination methods included stream classification utilizing the NCDWQ Stream Identification Form and the USACE Stream Quality Assessment Worksheet. Potential jurisdictional wetland areas as well as typical upland areas were classified using the USACE Wetland Determination Data Form.

The results of the on-site field investigation indicate that there are five jurisdictional stream channels located within the proposed project area including Norkett Branch and four unnamed

tributaries (UT1, UT2, UT2A, and UT3) to Norkett Branch. The project reaches of Norkett Branch, UT1, UT2, and the lower portion of UT2A have been verified as perennial channels. The remainder of UT2A and all of UT3 has been classified as intermittent stream channels. The USACE conducted a site walk on July 11, 2012, and the NCDWQ conducted a site walk on August 22, 2012. The USACE jurisdictional verification was issued on December 14, 2012. Norkett Branch (NCDWQ Index No. 13-17-40-8) is the main tributary of the project and has been classified as WS-V waters. On-site stream channels are located within the NCDWQ Subbasin 03-07-14 of the Yadkin River Basin (HU# 03040105).

Ten jurisdictional wetland areas were identified within the proposed project area (Wetlands A – J) and are located within the floodplains of Norkett Branch, UT1, and UT2. Appendix 2 contains a figure showing the overview of the site assessment data points. Wetland Determination Data Forms representative of on-site jurisdictional wetlands as well as non-jurisdictional upland areas have been enclosed in Appendix 2 (DP1-DP12). Site photographs are included in Appendix 1, taken at locations as shown in Figure 1-1 included in the same appendix.

The North Carolina Division of Water Quality (NCDWQ) assigns best usage classifications to State Waters that reflect water quality conditions and potential resource usage. Norkett Branch (DWQ Index No. 13-17-40-8) is the main tributary of the project and has been classified as Class WS-V waters. Class WS-V waters are protected as water supplies draining to Class WS-IV waters or waters used by industry to supply drinking water or waters formerly used as water supply.

5.0 Baseline Information – Reach Summary

On-site existing conditions assessments were conducted by Wildlands during August and September 2012. The locations of the project reaches and surveyed cross sections are shown in Figure 7. Existing geomorphic survey data is included in Appendix 6. Table 4 presents the reach summary information.

Table 4. Reach Summary Information
Norkett Branch Stream Mitigation Site

	Norkett Branch Reach 1	Norkett Branch Reach 2	UT1	UT2	UT2A	UT3
Restored Length (LF)	2,268	1,458	1,198	4,124	1,296	163
Valley Type[1]	N/A	N/A	N/A	N/A	N/A	N/A
Valley Slope (feet/ foot)	0.0027	0.0040A/ 0.00142[2]	0.0015	0.0063-0.0086	0.0147	0.019
Drainage Area (acres)	1,490	2,034	48	457	72	28
Drainage Area (square miles)	2.3	3.2	0.08	0.72	0.11	0.04
NCDWQ stream ID score	43.75	41.5	32.25	35.75	23, 30.75	25.75
Perennial or Intermittent	P	P	P	P	I	I

	Norkett Branch Reach 1	Norkett Branch Reach 2	UT1	UT2	UT2A	UT3
NCDWQ Classification	WS-V	WS-V	WS-V	WS-V	WS-V	WS-V
Rosgen Classification of Pre-Project Reach	E4	C/E5	E6	C/E4	C5	C5/6
Simon Evolutionary Stage	III	III/IV	II/III	II, IV	IV	II/ III
FEMA classification	AE	AE	N/A	N/A	N/A	N/A

1. Valley descriptions included in Section 4. Rosgen valley type classification not applicable.
2. Norkett Branch Reach 2 slope is subdivided into 2A and 2B to account for flat channel slope upstream of the collapsed bridge.

5.1 Existing Stream and Vegetation Condition

Norkett Branch has been channelized and is routinely maintained to provide drainage for surrounding farm land. Early signs of bench formation were noted in some areas with minor lateral migration. Impacts to the stream include straightening and ditching, eroding banks, and a lack of stabilizing riparian vegetation. The adjacent floodplain area has been cleared for agricultural use and is currently being farmed for soybeans. The riparian vegetation is subject to seasonal bush hogging, and the current buffer consists of overgrown annual vegetation, invasive shrub and vines, and some small early successional tree species.

The northern half of Norkett Branch, downstream of the confluence with UT2, consists of livestock pastures. The stream is used as water sources for the cattle. As a result, the stream banks have been trampled, channels are over-widened, and banks show signs of instability. Algal blooms, presumably from agricultural nutrient loading, were observed during site visits. The adjacent floodplain is pasture with little or no riparian buffer.

UT1 flows from the east, through the row crops, to its confluence with Norkett Branch. Like Norkett Branch, the riparian zone of UT1 is actively maintained and the stream appears to have been ditched in the past. Channel banks are comprised of herbaceous cover with few small trees and shrubs.

UT2 flows from the south, alternately through row crops and pasture, before joining Norkett Branch east of Philadelphia Church Road. The portions of UT2 within the row crop fields are actively maintained. Channel banks are well covered in herbaceous but lack tree or shrub vegetation. UT2 Reach 2 flows through a pasture used for livestock grazing. The cattle have direct access to the channel as a water source. As a result, the stream banks have been trampled and banks show signs of instability. In additional to pasture grasses, pockets of mature trees at or near top of bank are present in the upper and lower ends of the pasture. The cattle seek refuge within these shaded areas during the summer and as a result the channel is over-widened with trampled banks. Bedrock provides vertical stability in UT2 near the confluence with UT2A.

UT2A and UT3 are small intermittent drainages to UT2 and Norkett Branch, respectively. Both drainages are within agricultural fields used for grazing. Bank and floodplain vegetation are entirely pasture grasses. Due to the intermittent nature of these drainages they do not serve as water sources for the cattle and have less evidence of trampling and erosion.

5.2 Stream Geomorphology

Geomorphic assessments were conducted for each project reach. Data collection included representative cross sections and longitudinal profile, reach-wide pebble counts, riffle 100-counts and subpavement sampling. Collected data is included in Appendix 4.

The streams exist in an unnatural condition due to livestock access, maintenance, and agricultural activities; therefore, reliable bankfull features were difficult to identify and in most cases, did not exist. The effective discharge was estimated using methods outlined Section 5.5; this effective discharge was routed through the surveyed cross sections to quantify existing condition bankfull dimensions for descriptive purposes. Existing geomorphic conditions for each reach included in the project are summarized below in Table 5A and the reaches are mapped on Figure 7.

Norkett Branch Reach 1 flows northward through active row crop fields. The reach is located upstream of its confluence with UT2 and east of Philadelphia Church Road. The reach drains 2.3 square miles. The reach appears to have been channelized and maintained. The channel has a width to depth ratio that ranges from 5.9 to 13.0 and a slope of 0.0039 ft/ft. The channel becomes more incised in the downstream direction, and the bank height ratio transitions from near 1.0 at the upstream end to 1.4 at the downstream end of the reach. The d_{50} of the bed material is in the gravel substrate range. The channel classifies as an E4.

Norkett Branch Reach 2 begins at the confluence with UT2 and continues in a northward direction to the downstream boundary of the project area. The reach flows through active pastures and drains 3.2 square miles. The stream has been channelized and the majority of reach is straight with little to no pattern. The reach has a width to depth ratio that ranges from 9.2 to 21.4. A collapsed bridge crossing mid-reach has created backwater conditions in the upper half of the reach. Channel slope above the collapsed bridge is 0.0013 ft/ft for Reach 2A. Below the collapsed bridge crossing channel slope is 0.0046 ft/ft for Reach 2B. Bank height ratios range from 1.3 to 1.6. The d_{50} of the bed material is in the sand range. The channel classifies as a C/E5.

UT1 is a small tributary that flows into Norkett Branch from the east. The reach is surrounded by row crop fields and drains 0.08 square miles. The channel has been channelized and is essentially straight. The channel has a width to depth ratio of 3.2 to 7.9, a slope of 0.015 ft/ft, and bank height ratios ranging from 1.5 to 2.4. The bed material is dominated by fine silt and clay substrate. The channel classifies as an E6.

UT2 Reach 1 is located on the west side of Philadelphia Church Road. The channel originates from a pond immediately upstream of the project area. 154 acres of UT2 Reach 1's 250-acre drainage area is subject to the attenuation of this pond, as will be discussed further. UT2 Reach 1 flows northward through a row crop field and terminates at the Howey/Haigler property line as the channel enters active pastureland. The channel has been extensively impacted for agricultural operations. The reach is essentially straight and lacks any canopy with row crops immediately adjacent to the channel. The reach has a width to depth ratio of 23.4 and sub-

reach channel slopes ranging between 0.004 and 0.007 ft/ft. Bank height ratios are near to 1.0, a reflection of the channel being graded out into a wide, shallow V-ditch for farm equipment to drive across. The d_{50} of the bed material is in the gravel substrate range. The channel classifies as a highly altered C/E4.

UT2 Reach 2 begins at the Howey/Haigler property line and flows in a northeasterly direction to its confluence with UT2A. Shallow bedrock is present near the bottom of the reach which is providing vertical stability at the UT2A confluence. However cattle have created lateral instability, especially in the upper portion of the reach, by trampling banks and over-widening the channel. There are some irregularly spaced meanders in portions of UT2 Reach 2, therefore limited pattern measurements are included in Tables 5A and 5B. The reach has a width to depth ratio of 9.8 and sub-reach channel slopes ranging between 0.007 and 0.012 ft/ft. Bank height ratios range from 1.0 in the bedrock underlain areas to 1.7 in more impacted areas. The d_{50} of the bed material is in the gravel substrate range. The reach classifies as a low sinuosity E4.

UT2 Reach 3 begins at the confluence with UT2A and continues flowing in a northeasterly direction under Philadelphia Church Road to the confluence with Norkett Branch. The channel flows through active pasture and row crop fields and has a very thin riparian buffer dominated by invasive Chinese privet east of Philadelphia Church Road. The channel has a width to depth ratio of 6.7 and slope of 0.009 ft/ft. Bank height ratios range from 1.3 to 1.8. The d_{50} of the bed material is in the gravel substrate range. The reach classifies as an E4.

Table 5A. Existing Stream Conditions- Norkett Branch and UT1
Norkett Branch Stream Mitigation Site

	Notation	Units	Norkett Branch Reach 1		Norkett Branch Reach 2		UT1	
			Min	Max	Min	Max	Min	Max
stream type			E4 [3]		C/E5 [3]		E6 [3]	
drainage area	DA	sq mi	2.3		3.2		0.08	
bankfull discharge	Q	cfs	110		140		12	
bankfull cross-sectional area	A_{bkf}	SF	28.1	35.6	40.6	52.8	2.6	8.6
average velocity during bankfull event	v_{bkf}	fps	3.5	4	2.5	3.5	3.3	4.2
Cross-Section								
width at bankfull	w_{bkf}	feet	12.8	21.5	22.0	29.5	2.9	8.2
maximum depth at bankfull	d_{max}	feet	3.1	3.2	2.3	2.9	1.2	2.0

	Notation	Units	Norkett Branch Reach 1		Norkett Branch Reach 2		UT1	
			Min	Max	Min	Max	Min	Max
mean depth at bankfull	d_{bkf}	feet	1.7	1.8	1.4	2.4	0.9	1.0
bankfull width to depth ratio	w_{bkf}/d_{bkf}		5.9	13.0	9.2	21.4	3.2	7.9
low bank height		feet	3.1	4.3	3.6	3.8	2.9	3.1
bank height ratio	BHR		1.0	1.4	1.3	1.6	1.5	2.4
floodprone area width	w_{fpa}	feet	35	58	72	85	6	40
entrenchment ratio	ER		2.1	4.5	2.9	3.3	2.2	4.9
Slope								
valley slope	S_{valley}	feet/ foot	0.0027		0.0040 2A; 0.0014 2B		0.015	
channel slope	$S_{channel}$	feet/ foot	0.0039 [1]		0.0013 2A [2]; 0.0046 2B [1]		0.015	
Profile					**2A**	**2B**		
riffle slope	S_{riffle}	feet/ foot	0.0036-0.0039		0.0032-0.0044	0.0042-0.012	0.017	0.054
riffle slope ratio	$S_{riffle}/S_{channel}$		1.1		2.4-3.4	0.8-2.3	1.1	3.6
pool slope	S_{pool}	feet/ foot	0-0.002		0.000	0.000	0.0047	0.0048
pool slope ratio	$S_{pool}/S_{channel}$		0-0.5		0.000	0.000	0.32	0.33
pool-to-pool spacing	L_{p-p}	feet	62-300		105-300	60-218	61	295
pool spacing ratio	L_{p-p}/w_{bkf}		5.8-28		3.5-9.8	2.0-7.1	11	53
pool cross-sectional area		SF	42.7	43.9	47.2	62.2	4.1	7.0
pool area ratio			1.2	1.6	1.2	1.2	0.5	2.7
maximum pool depth		feet	4.0	4.0	2.9	4.0	1.4	1.7
pool depth ratio			1.3	1.3	1.4	1.9	0.7	1.4
pool width at bankfull		feet	16.0	18.4	26.6	27.9	3.7	5.8

	Notation	Units	Norkett Branch Reach 1		Norkett Branch Reach 2		UT1	
			Min	Max	Min	Max	Min	Max
pool width ratio			0.7	1.4	0.9	1.3	0.4	2.0
Pattern								
sinuosity	K		1.1		1.1		1.0	
belt width	w_{blt}	feet	N/A	N/A	N/A	N/A	N/A	N/A
meander width ratio	w_{blt}/w_{bkf}		N/A	N/A	N/A	N/A	N/A	N/A
meander length	L_m	feet	N/A	N/A	N/A	N/A	N/A	N/A
meander length ratio	L_m/w_{bkf}		N/A	N/A	N/A	N/A	N/A	N/A
radius of curvature	R_c	feet	N/A	N/A	N/A	N/A	N/A	N/A
radius of curvature ratio	R_c/ w_{bkf}		N/A	N/A	N/A	N/A	N/A	N/A
Particle Size Distribution from Reach-wide Pebble Count								
d_{50} Description			gravel		sand		silt/ clay	
	d_{16}	mm	silt/ clay		silt/ clay		silt/ clay	
	d_{35}	mm	4.62		silt/ clay		silt/ clay	
	d_{50}	mm	8.66		0.4		silt/ clay	
	d_{84}	mm	28.5		21.1		0.77	
	d_{95}	mm	64		>2048		9.38	
	d_{100}	mm	>2048		>2048		>2048	

Notes:

1. Channels become more incised in downstream direction, causing channel slope to be steeper than valley slope.

2. Norkett Branch Reach 2A channel slope flat due to collapsed bridge crossing.

3. The Rosgen classification system is for natural streams. These channels have been heavily manipulated by man and therefore the Rosgen classification system is not applicable. These classifications are provided for illustrative purposes only.

Table 5B. Existing Stream Conditions- UT2
Norkett Branch Stream Mitigation Site

	Notation	Units	UT2 Reach 1		UT2 Reach 2		UT2 Reach 3	
			Min	Max	Min	Max	Min	Max
stream type			C/E4 [3]		E4 [3]		E4 [3]	
drainage area	DA	sq mi	0.40		0.48		0.71	
bankfull discharge	Q	cfs	11		17		26-33	
bankfull cross-sectional area	A_{bkf}	SF	7.9		5.1		8.3	
average velocity during bankfull event	v_{bkf}	fps	1.4		3.4		3.7	
Cross-Section								
width at bankfull	w_{bkf}	feet	13.6		7.1		7.5	
maximum depth at bankfull	d_{max}	feet	1.0		1.5		1.6	
mean depth at bankfull	d_{bkf}	feet	0.6		0.7		1.1	
bankfull width to depth ratio	w_{bkf}/d_{bkf}		23.4		9.8		6.7	
low bank height		feet	1.0		1.5	2.6	2.0	2.9
bank height ratio	BHR		1.0		1.0	1.7	1.3	1.8
floodprone area width	w_{fpa}	feet	29		53		24	
entrenchment ratio	ER		>7		>8		3.2	
Slope								
valley slope	S_{valley}	feet/ foot	0.0063		0.0086		0.0074	
channel slope	$S_{channel}$	feet/ foot	0.004-0.007		0.007-0.012		0.009	
Profile								

	Notation	Units	UT2 Reach 1		UT2 Reach 2		UT2 Reach 3	
			Min	Max	Min	Max	Min	Max
riffle slope	S_{riffle}	feet/ foot	0.009	0.032	0.006		0.014	0.025
riffle slope ratio	$S_{riffle}/S_{channel}$		1.3	4.6	0.86		1.8	3.1
pool slope	S_{pool}	feet/ foot	0.003		0	0.002	0.001	0.002
pool slope ratio	$S_{pool}/S_{channel}$		0.43		0.0001	0.2857	0.13	0.25
pool-to-pool spacing	L_{p-p}	feet	190		51	130	26	53
pool spacing ratio	L_{p-p}/w_{bkf}		13.93		7	18	3	7
pool cross-sectional area		SF	10.0		15.7		11.5	
pool area ratio			1.3		3.0		1.3	
maximum pool depth		feet	1.3		2.5		2.0	
pool depth ratio			1.3		1.7		1.3	
pool width at bankfull		feet	19.8		12.9		6.7	
pool width ratio			1.5		1.7		0.9	
Pattern								
sinuosity	K		1.0		1.1		1.1	
belt width	w_{blt}	feet	N/A	N/A	26.9	49.5	N/A	N/A
meander width ratio	w_{blt}/w_{bkf}		N/A	N/A	3.80	7.01	N/A	N/A
meander length	L_m	feet	N/A	N/A	83.5	141.4	N/A	N/A
meander length ratio	L_m/w_{bkf}		N/A	N/A	11.83	20.03	N/A	N/A
radius of curvature	R_c	feet	N/A	N/A	6.92	33.39	15	63.4
radius of curvature ratio	R_c/ w_{bkf}		N/A	N/A	0.98	4.73	2.00	8.45
Particle Size Distribution from Reach-wide Pebble Count								
d_{50} Description			gravel		gravel		gravel	
	d_{16}	mm	silt/ clay		silt/ clay		silt/ clay	
	d_{35}	mm	silt/ clay		silt/ clay		silt/ clay	
	d_{50}	mm	7.32		7.32		7.32	
	d_{84}	mm	47.7		47.7		47.7	

	Notation	Units	UT2 Reach 1		UT2 Reach 2		UT2 Reach 3	
			Min	Max	Min	Max	Min	Max
	d_{95}	mm	85.7		85.7		85.7	
	d_{100}	mm	>2048		>2048		>2048	

Notes:
1. Channels become more incised in downstream direction, causing channel slope to be steeper than valley slope.

2. Norkett Branch Reach 2A channel slope flat due to collapsed bridge crossing.

3. The Rosgen classification system is for natural streams. These channels have been heavily manipulated by man and therefore the Rosgen classification system is not applicable. These classifications are provided for illustrative purposes only.

UT2A and UT3 are intermittent tributaries summarized in Table 5B. UT2A is an intermittent drainage located in the northwestern corner of the project area and flows to the southeast where it joins UT2. UT2A flows through an active pasture and is devoid of any riparian buffer. The channel has a width to depth ratio of 12.6, a slope of 0.0147 ft/ft, and a d_{50} in the sand range. The channel is moderately incised with bank height ratios of approximately 1.6. The reach classifies most nearly as an impacted C/E5 channel.

UT3 is an intermittent drainage located in the northwestern corner of the project area and flows to the southeast where it joins UT2. UT3 flows through an active pasture. The channel has a width to depth ratio of 14.3, a slope of 0.0147 ft/ft. and a d_{50} in the sand/ silt range. The channel is incised, as evidenced by the measured bank height ratio of 1.9. The reach classifies most closely as an impacted C5/6 channel.

Existing geomorphic conditions for UT2A and UT3 are summarized below in Table 5C.

Table 5C. Existing Stream Conditions- Intermittent Tributaries UT2A and UT3
Norkett Branch Stream Mitigation Site

	Notation	Units	UT2A	UT3
stream type			C/E5 [1]	C5/6 [1]
drainage area	DA	sq mi	0.11	0.04
bankfull cross-sectional area	A_{bkf}	SF	4.6	2.1
width at bankfull	w_{bkf}	feet	7.6	5.4
mean depth at bankfull	d_{bkf}	feet	0.6	0.4
bankfull width-to-depth ratio	w_{bkf}/d_{bkf}		12.6	14.3
bank height ratio	BHR		1.6	1.9
entrenchment ratio	ER	feet/foot	3.5	2.3

[1] The Rosgen classification system is for natural streams. These channels have been heavily manipulated by man and therefore the Rosgen classification system is not applicable. These classifications are provided for illustrative purposes only.

5.3 Channel Evolution

Channelization usually includes straightening and deepening of streams and is one of the major causes of channel down-cutting or incision (Simon, 1989; Simon and Rinaldi, 2006). Based on

Simon's model termed the Channel Evolution Model for Incised Rivers (1989), alluvial streams typically follow a sequential series of evolutionary stages as they respond and ultimately recover from impacts due to channelization or majors changes to hydrologic and sediment regime. Pre-disturbance is considered Stage I - Equilibrium. Stage II - Channelization occurs when the stream is either directly channelized by man through ditching or channelization occurs as an indirect result of hydrologic or sediment regime changes in the watershed. These actions take the stream out of equilibrium and alluvial channels will incise and degrade in response to the excess stream energy associated with Stage II. This incision process is Stage III - Degradation. As the bottom of the channel continues to erode and stream banks are undercut, the banks will begin to fail and the channel widens as it degrades. This next stage is classified as Stage IV – Degradation and Widening. Eventually, the stream slope will decrease enough that the stream stops incising but continues to widen through alternate bank erosion and aggradation (Stage V- Aggradation and Widening). At Stage V, new bankfull features begin to establish at a lower position relative to the old valley floor, and the stream continues to widen its new floodplain through alternate bank erosion until it eventually returns to a state of quasi-equilibrium (Stage VI). Lateral adjustment processes (migration) are often associated with Stages IV and V.

Norkett Branch is actively maintained or repeatedly impacted by cattle trampling. This channel is best described by late Stage III/ early Stage IV. It is likely that periodic mechanical maintenance and livestock alterations interrupt and prevent full recovery of the channels impacts returning them to Stage II, leaving the streams in a constant cycle of disturbance and partial recovery.

There is slight bed degradation along UT1, especially as it approaches its confluence with Norkett Branch. UT1 can be described as between Stage II and Stage III.

UT2 Reach 1 has been mechanically altered in the corn fields but shows no evidence of downcutting and therefore can be described by Stage II. UT2 Reach 2 is most impacted by wallow areas at the upper and lower ends of the pasture. While the channel is incised in the wallow areas, this is a result of the direct, localized impacts associated with the cattle and not the result of system wide adjustment processes. Shallow bedrock in UT2 and UT2A has prevented vertical incision in Reach 2. UT2 Reach 3 has incised to meet grade at the Philadelphia Church Road culvert and at the confluence with Norkett Branch and can best be described as Stage IV.

UT2A is laterally eroding and can best be described by Stage IV. UT3 is continuously disturbed by cattle trampling and is incising to meet the grade of the larger, deeper Norkett Branch. UT3 is best described in Stage II to III.

None of the channels have advanced through the evolutionary process to Stage V or VI where a new quasi-equilibrium can be expected. Numerous years of degradation and widening, contributing substantial sediment loading to downstream waters, are expected before these channels could achieve a new stable form on their own without channel form intervention. Restoration has been selected as the appropriate treatment approach in order to establish a stable cross-section, pattern, and profile rather than stabilizing a poorly functioning channel in place. Restoration will re-connect the currently incised channels with an expansive floodplain for energy dissipation.

5.4 *Channel Stability Assessment*

Wildlands utilized a modified version of the Rapid Assessment of Channel Stability as described in Hydrologic Engineering Circular (HEC)-20 (Lagasse, 2001). The method is semi-quantitative and incorporates thirteen stability indicators that are evaluated in the field. In a 2007 publication, the Federal Highway Administration (FHWA) updated the method for HEC-20 by modifying the metrics included in the assessment and incorporating a stream type determination. The result is an assessment method that can be rapidly applied on a variety of stream types in different physiographic settings with a range of bed and bank materials.

The Channel Stability Assessment protocol was designed to evaluate 13 parameters: watershed land use, status of flow, channel pattern, entrenchment/channel confinement, bed substrate material, bar development, presence of obstructions and debris jams, bank soil texture and coherence, average bank angle, bank vegetation, bank cutting, mass wasting/bank failure, and upstream distance to bridge. Each parameter is individually rated on a scale of Excellent, Good, Fair, or Poor per FHWA guidelines for pool-riffle stream types. Lower scores are indicative of increased stability. Ratings are as follows:

- Excellent (1-3 points)
- Good (4-6 points)
- Fair (7-9 points)
- Poor (10-12 points)

Once all parameters are scored, the overall stability of the stream is then classified with similar scoring adjectives (Excellent, Good, Fair, or Poor). The adjectives assigned to the streams are as follows:

- Excellent (< 41)
- Good (41 to less than 70)
- Fair (70 to less than 98)
- Poor (98 or higher)

As the protocol was designed to assess stream channel stability near bridges, two minor modifications were made to the methodology to make it more applicable to project specific conditions. The first modification involved adjusting the scoring so that naturally meandering streams score lower (better condition) than straight and/or engineered channels. Because straight, engineered channels are hydraulically efficient and necessary for bridge protection, they score low (excellent to good rating) with the original methodology. Secondly, the last assessment parameter – upstream distance to bridge – was removed from the protocol because it relates directly to the potential effects of instability on a bridge and should not influence stability ratings for the streams assessed for this project. The final scores and corresponding ratings were based on the twelve remaining parameters.

The HEC-20 manual also describes both lateral and vertical components of overall channel stability which can be separated with this assessment methodology. Some of the 13 parameters described above relate specifically to either vertical or horizontal stability. When all parameter scores for the vertical category or all parameter scores for the horizontal category are summed and normalized by the total possible scores for their respective categories, a vertical or horizontal fraction is produced. These fractions may then be compared to one another determine if the channel is more vertically or horizontally unstable.

The assessment results for the streams on the Norkett Branch project site indicate that the majority of streams rated in the second to the lowest category – fair. Exceptions included UT1 and those portions of UT2 within the cornfields west of Philadelphia Church Road. These areas are relatively stable due to extensive manipulation for agricultural purposes. However they rated poor for bank protection. For every stream assessed, except for UT1, the lateral fraction was greater than the vertical fraction. This indicates that lateral instability is a greater problem for these streams than vertical instability. Total scores, stability ratings, and vertical and horizontal fractions are provided in Table 6.

Table 6. Existing Conditions Channel Stability Assessment Results
Norkett Branch Stream Mitigation Site

Parameter	NB R1	NB R2	UT1	UT2 R1	UT2 R2	UT2 R3	UT2A
1. Watershed characteristics	10	10	10	10	10	10	10
2. Flow habit	4	4	3	3	3	3	3
3. Channel pattern	9	11	9	9	9	10	11
4. Entrenchment	6	8	8	3	6	7	7
5. Bed material	5	5	10	8	8	8	8
6. Bar development	7	10	1	1	1	1	1
7. Obstructions	4	6	2	1	4	1	1
8. Bank soil texture and coherence	5	5	5	5	5	5	5
9. Average bank slope angle	5	9	7	2	9	7	10
10. Bank protection	9	11	7	12	10	8	12
11. Bank cutting	7	7	4	1	6	7	8
12. Mass wasting or bank failure	8	7	6	1	6	6	6
Score	79	93	72	56	77	73	82
Rating	Fair	Fair	Good	Good	Fair	Fair	Fair
Lateral Fraction	0.57	0.65	0.48	0.35	0.60	0.55	0.68
Vertical Fraction	0.50	0.64	0.53	0.33	0.42	0.44	0.44

5.5 Design Discharge Development

Multiple methods were used to develop bankfull discharge estimates of the project reaches. The resulting values were compared and concurrence between the estimates and best professional judgment were used to determine the specific design discharge for each project reach.

The methods to estimate discharge included:

1. The published North Carolina rural Piedmont curve drainage area- discharge relationships;
2. The provisional Updated North Carolina rural Piedmont/ Mountain curve (Walker) Curve drainage area- discharge relationships;
3. Hydraulic modeling of the Dutchman's Creek USGS gage;
4. Drainage area – discharge relationships from reference reaches;
5. Regional flood frequency analysis developed for this project;
6. USGS flood frequency equations for rural watersheds in the North Carolina Ridge and Valley- Piedmont region;
7. Discharge analysis of existing channels at top of bank to estimate an upper limit discharge;
8. Hydrologic modeling of the UT2 watershed to account for flow attenuation in the upstream pond; and
9. Site specific observations unique to Union County hydrology.

5.5.1 NC Rural Piedmont Regional Curve Predictions

The published NC rural Piedmont curve was used to estimate discharge based on drainage area using regional relationships. Figure 8 illustrates the NC Piedmont curve.

5.5.2 Provisional Updated NC Piedmont/Mountain Regional Curve Predictions

The draft updated curve for rural Piedmont and mountain stream channels was used to estimate discharge based on drainage area using regional relationships (Walker, unpublished). It has been the experience of many practitioners that the original NC Curves have over-predicted bankfull. The original rural curve was developed using both gaged and ungaged sites. The methods used to develop discharge estimations for the ungaged sites are believed to have over-estimated the points on the discharge curve (Walker, 2013). In addition, some of the gaged sites used in the original rural curve may have been somewhat incised, with bank height ratios ranging up to 1.5. This enlargement may have contributed to larger discharge values used in development of the curve (Harman, 2013). The updated curves, in our experience, often correlate with reference reach parameters and appear to be a better indicator of bankfull relationships utilized in design.

5.5.3 Dutchman's Creek USGS Gage Discharge

A detailed analysis was completed at the Dutchman's Creek Gage which provided data for both the reference reach relationships and the regional flood frequency analysis. Bankfull indicators were identified and surveyed at six (6) cross-sections located upstream and downstream of the culverted road crossing where the gage is installed. The bankfull indicators included slope breaks and a bankfull bench feature. A HEC-RAS model was developed to correlate bankfull indicators with recorded gage readings and determine bankfull discharge at the gage site. The HEC-RAS model takes into account hydraulic effects at the culvert. A discharge of 180 to 220 cfs was established for the bankfull stage which corresponds to a recurrence interval of 1.2 to 1.3 years based on log-Pearson Type III flood frequency analysis of the gage record.

5.5.4 *Drainage Area- Discharge Relationships from Reference Reaches*

Reference reaches identified for this project include two sites with stable cross-sections surveyed primarily to assist with the drainage area-discharge relationship, and three sites utilized for discharge, dimension, pattern, and profile reference data. The two sites surveyed as discharge references are an upper reach of Dutchman's Creek with drainage area 2.9 square miles and UT to Richland Creek Reach 1 with a drainage area of 0.28 square miles. The three sites referenced for discharge and geomorphic data are Spencer Creek (0.96 square miles), UT to Spencer Creek (0.014 square miles), and UT to Richland Creek Reach 2 (0.97 square miles). These data points were used to estimate a reference drainage area- discharge relationship to predict discharge values for the Norkett Branch project reaches.

5.5.5 *Regional Flood Frequency Analysis*

Four USGS stream gage sites were identified within reasonable proximity of the project site for use in development of a project specific regional flood frequency analysis. Data from these gages were used to develop a regional flood frequency curve as described by Dalrymple (1960). The gages used were:

- 2123567 – Dutchman's Creek near Uwharrie, NC (drainage area 3.4 square miles);
- 212467595 – Goose Creek at S.R. 1525 near Indian Trail, NC (drainage area 11.0 square miles);
- 02124692 – Goose Creek at Fairview, NC (drainage area 12.0 square miles); and
- 2124080 – Clarke Creek near Harrisburg, NC (drainage area 21.9 square miles).

The four gages did pass the homogeneity test. However, each of these gages, with the exception of the Dutchman's Gage, represents a larger drainage area than the project reaches. The 3 larger gages also are located in developing areas and appear to represent watershed with higher percentages of impervious area than the Dutchman's gage or the project reaches. The resulting flood frequency analysis predicted the 1.5-year event for these same gages used to build the analysis by +/- 50%, which suggests that there is not a high accuracy correlation for this analysis. The results of this regional flood frequency analysis were considered, but were not weighted heavily in selecting the final design discharge for the project site reaches.

5.5.6 *USGS Flood Frequency Equations for Rural Watersheds in the NC Ridge and Valley-Piedmont*

USGS flood frequency equations for rural watersheds in the North Carolina Ridge and Valley-Piedmont Region 1 (USGS, 2009) were used to estimate peak discharges for each reach for floods with a recurrence interval of 2, 5, 10, and 25 years. These recurrence interval events were used to extrapolate a discharge estimate for the 1.2- year event. The 1.2-year event was selected based on the recurrence interval result of the bankfull discharge at the Dutchman's Creek gage analysis as discussed in Section 5.5.3.

5.5.7 *Discharge Analysis of Existing Channel Top of Bank*

Manning's equation was used to calculate the discharge in each of the project reaches for the channel-filling flow at existing top of bank. As has been discussed, the on site channels show evidence of lateral and vertical instability. These channels are oversized in their current condition. Part of the discharge selection criteria was that the discharge for channels flowing full at current top of bank should function as an upper limit boundary for the design condition.

In other words, the design channels should not be sized to carry more flow than the existing channel since the existing condition shows signs of being oversized.

5.5.8 Hydrologic Modeling of UT2 Pond

A 5.8-acre pond upstream of the UT2 project reach attenuates 154 acres of the 457-acre UT2 drainage area. Hydrologic modeling of the pond and outfall structures indicates that the pond stores more than 85% of the peak discharge up through the 25-year storm event. Due to this significant attenuation of runoff, the design discharge for UT2 was selected considering a watershed size of 0.48 square miles, thus removing the 0.24-square miles of drainage area routed through the pond.

5.5.9 Site Specific Observations

Wildlands has worked on several sites in Union and Stanly Counties. The hydrology in this portion of the slate belt is unique to this part of the Piedmont. Shallow bedrock with prevalent surface fractures allows surface water to disappear and flow subsurface or provide groundwater recharge and storage, especially during the summer months. Riffles are typically dry in the summer with standing water in pool areas. According to the USGS and others the Carolina Slate Belt contains some of the lowest water-yielding rocks in the state and base flows in streams tend to be low (Griffith and Omernik, 2008; Giese and Mason, 1993). Between a low base flow condition and the attenuation of multiple pond storage features within the watershed, our experience has been that channel-forming discharge is significantly lower in this area of Union County, NC.

5.5.10 Design Discharge Selection

In consideration of each of these discharge estimations, and with consideration for the observed geology, low baseflow characteristics, and our experience in this portion of the slate belt in Union County, we have selected the design discharge values in the lowest range that can be supported by available data. Design values were selected very near to the provisional updated Walker curve predictions. Table 7 summarizes the results of each of the discharge analyses described in this section and the final selected design discharge for each of the project reaches.

Table 7. Design Discharge Analysis Summary
Norkett Branch Mitigation Project

Reach	Rural Piedmont Regional Curve Discharge Estimate (cfs)	Alan Walker Rural Mountain and Piedmont Regional Curve Discharge Estimate (cfs)	Reference Reach Discharge Estimate (cfs)	Regional Flood Frequency Analysis 1.2-yr Discharge Estimate (cfs)	USGS Flood Frequency Equation 1.2-yr Discharge Estimate (cfs)	Existing Top of Bank Discharge (cfs)	Design Q (cfs)
Norkett Branch Reach 1	164	108	139	211	148	193	110
Norkett Branch Reach 2	205	138	171	253	185	393	140
UT1	14	7	15	29	12	92	12
UT2	51	30	48	81	46	46	33
UT2A	18	10	18	35	16	52	N/A
UT3	9	5	9	19	8	50	N/A

5.6 Water Quality BMP Areas

Two areas draining pasture and agricultural fields will be fitted with BMPs to treat water quality concerns. Two different BMP approaches were selected at the request of the IRT so that these two BMP types can be compared side-by-side at the same site. One BMP area (29.7 acres) is located upstream of the intermittent UT3 channel; this area will be designed with a Step Pool Storm Conveyance (SPSC) BMP. The other area (19.9 acres) is located on a non-jurisdictional drainage swale in the right floodplain of Norkett Branch near the downstream limit of the project. This area will be designed with a pocket wetland. Both of these areas drain pasture land and agricultural fields. Storm water runoff through these areas carries herbicides, pesticides, eroded sediment, and livestock waste from the upstream fields to Norkett Branch. Neither of the BMP sites is located within jurisdictional streams or wetlands.

The SPSC BMP is an open channel that conveys, attenuates, and treats storm water runoff for pollutant removal. Alternating stone riffles and shallow pools are constructed on top of a mixture of sand and woodchips. Pollutant removal is primarily achieved by infiltration through the sand/woodchip mixture. Native riparian vegetation provides secondary pollutant removal via nutrient uptake. SPSC BMPs also provide energy dissipation and flow velocity reduction. The riffles are designed to encourage subcritical flow while the pools are sized to provide adequate energy dissipation. Lower energy and flow velocities reduce stream power, which helps protect downstream receiving channel banks. The SPSC dimensions are determined based on peak flows, contributing land use, and slope of SPSC channel. The volume of the sand/woodchip mixture is sized to contain the calculated water quality volume. Water quality volume is calculated using Schueler's Simple Method, which accounts for pollutant concentrations of the contributing watershed and annual rainfall (Schueler, 1987). Pollutant removal rates for SPSC BMPs have not been established due to its recent development. However, a SPSC uses similar removal mechanisms (filtration and biological uptake) as a bioretention area while also reducing stream bank erosion and providing flow attenuation. A

SPSC BMP can be expected to provide similar pollutant removal rates as the published removal rates of a bioretention area with IWS (NCDWQ, 2007), which are 85% total suspended solids (TSS) removal, 40% total nitrogen (TN) removal, and 40% total phosphorus (TP) removal.

A pocket wetland is a constructed BMP that mimics the functionality of a natural wetland. The primary pollutant removal mechanisms of a pocket wetland are settlement and nutrient uptake. Pockets wetlands have a shallow permanent pool, approximately 9 inches deep. The temporary storage volume above the permanent pool is designed to capture and treat the water quality volume of the contributing drainage area. The attenuation provided by the pocket wetland allows pollutant-laden sediments to settle while the wetland plants provide nutrient uptake. Attenuation will be provided by a stone weir and outlet channel, which will require less maintenance than the typical concrete riser and barrel. Based on sparse published data, pocket wetlands provide lower removal rates than extended detention wetlands (CWP, 2000 and EPA, 2012). Pollutant removal rates from those sources were combined to establish the pocket wetland removal rates of 60% TSS removal, 20% TN removal, and 45% TP removal.

6.0 Baseline Information - Regulatory Considerations

Table 8 presents the project information and baseline wetland information.

Table 8. Regulatory Considerations
Norkett Branch Stream Mitigation Site

	Applicable?	Resolved?	Supporting Documentation
Waters of the US – Section 404	Yes	Yes	Appendix 2 & 3
Waters of the US – Section 401	Yes	Yes	Appendix 2 & 3
Endangered Species Act	Yes	Yes	Appendix 4
Historic Preservation Act	Yes	Yes	Appendix 4
Coastal Zone Management Act/Coastal Area Management Act	No	N/A	N/A
FEMA Floodplain Compliance	Yes	Yes	Appendix 7
Essential Fisheries Habitat	Yes	Yes	Appendix 4

6.1 401/404

As discussed in Section 4.5, the results of the onsite field investigation indicate that five channels including Norkett Branch, UT1 to Norkett Branch, UT2, UT2A, and UT3 are jurisdictional within the project limits. Additionally there are ten jurisdictional wetland areas (Wetland A - J) located in the proposed project area (Figure 7) totaling 2.06 acres. The project stream reaches and BMP areas will be protected under the conservation easement placed on the property. A copy of the Jurisdictional Determination is included in Appendix 2.

Impacts to existing wetland areas were avoided to the extent possible during the design phase, as shown in Figure 10. Small areas of excavation will be required on the edge of Wetlands A and G, totaling 0.006 acres. This represents impacts to less than 1% of the site's wetlands. Over time, it is expected that the restored floodplain hydrology will allow additional wetland areas to form.

In addition, the restored Norkett Branch Reach 1 will meander through an existing wetland area. 0.35 acres of existing wetlands in Wetland F are located within the proposed stream banks and will be converted from wetland to stream. The existing channel is a ditch located immediately adjacent to Wetland F. This ditch will be filled and converted into a wetland, thereby offsetting the 035-acre loss of wetland. The 0.35 acres of wetland located in the proposed stream banks will be classified as a permanent impact on the PCN application to the USACE. The converted wetlands will be monitored annually with photographs. The proposed stream restoration is expected to improve hydrology in the remaining Wetland F area and the adjacent proposed converted wetland area. Riparian plantings will further enhance the vegetation in the Wetland F and adjacent proposed converted wetland area.

6.2 Endangered and Threatened Species

6.2.1 Site Evaluation Methodology

The Endangered Species Act (ESA) of 1973, amended (16 U.S.C. 1531 et seq.), defines protection for species with the Federal Classification of Threatened (T) or Endangered (E). An "Endangered Species" is defined as "any species which is in danger of extinction throughout all or a significant portion of its range" and a "Threatened Species" is defined as "any species which is likely to become an Endangered Species within the foreseeable future throughout all or a significant portion of its range" (16 U.S.C. 1532).

Wildlands utilized the U.S. Fish and Wildlife Service (USFWS) and North Carolina Natural Heritage Program (NHP) databases in order to identify federally listed Threatened and Endangered plant and animal species for Union County, NC (USFWS, 2008 and NHP, 2009). The Union County listed endangered species include the Carolina heelsplitter (*Lasmigona decorate*), Michaux's sumac (*Rhus michaauxii)*, and Schweinitz's sunflower (*Helianthus schweinitzii*).

Table 9. Listed Threatened and Endangered Species in Union County, NC
Norkett Branch Stream Mitigation Site

Species	Federal Status	Habitat	Biological Conclusion
Vertebrate			
Carolina heelsplitter (*Lasmigona decorate*)	E	Stable, cool, well oxygenated, streams with minimal amounts of fine sediment.	No effect
Michaux's sumac (*Rhus michaauxii*)	E	Open areas where periodic disturbance has occurred.	No effect
Schweinitz's sunflower (*Helianthus schweinitzii*)	E	Open areas where periodic disturbance has occurred.	No effect

6.2.2 Threatened and Endangered Species Descriptions

Carolina Heelsplitter

The Carolina heelsplitter is a freshwater mussel that has an ovate, trapezoid-shaped shell that can vary from greenish brown to dark brown in color. The largest known specimen measured 4.6 inches in length. The Carolina heelsplitter inhabits clean, cool, well-oxygenated streams that are typically geomorphically stable and have minimal amounts of fine sediment.

Michaux's Sumac

Michaux's sumac is a rhizomatous, densely hairy shrub that typically stands 1m or less in height. The shrub has compound leaves with evenly serrated, oblong to lanceolate, acuminate leaflets. The species is found in sandy or rocky open areas where disturbance has occurred such as roadsides, powerline clearings, and the edges of maintained clearings.

Schweinitz's Sunflower

Schweinitz's sunflower is a perennial herb, usually growing 1 to 2 meters tall with yellow disk and ray flowers. The stems are usually pubescent and purple. A distinguishing feature is its carrot-like tuberous roots. This species is found in semi-sunny to sunny open areas where disturbance has occurred such as roadsides, power line clearings, old pastures and woodland openings. This species is generally found growing in shallow, poor, clayey and/or rocky soils.

6.2.3 Biological Conclusion

A pedestrian survey of the site was performed on September 18, 2011. On-site habitats include active agricultural pastures, active row crop fields, and small riparian wetlands.

Particularly as related to the Carolina heelsplitter, the site's streams exhibit heavy siltation from excessive bank erosion and a lack of stabilizing stream bank vegetation. These factors create highly unfavorable conditions for the Carolina heelsplitter species through all life cycle stages especially during fish host and juvenile stages due to water quality problems. The Norkett Branch site is over 16 miles from the nearest elements of occurrence for the Carolina heelsplitter. As a result of the pedestrian survey, no individual species, critical habitat or suitable habitat were found to exist on site for this species. Therefore a "no effect" biological conclusion was determined for the Carolina heelsplitter.

Michaux's sumac is best suited for open areas typically the result of periodic disturbance. Historically this may have been in the form of fire. Currently mechanical clearing along roadsides, utility right-of-ways, and along the edges of maintained clearings are potential habitat. During the pedestrian survey no individuals or populations as well as suitable habitat were observed. Therefore a "no effect" biological conclusion was determined.

Similar to Michaux's sumac, Schweinitz's sunflower prefers open areas that are the result of disturbance. During the pedestrian survey no individuals or populations were observed. In addition, due to the active agricultural practices occurring across the site no suitable habitat was observed during the pedestrian survey and a "no effect" biological conclusion was determined.

6.2.4 USFWS Concurrence

Wildlands requested review and comment from the USFWS on July 26, 2012, regarding the results of the site investigation and the project's potential impacts on threatened or endangered species. Since no response was received from the USFWS within a 30-day time frame, it is assumed that the site determination is correct and that no additional, relevant information is available for this site. All correspondence is included in Appendix 4.

6.3 Federally Designated Critical Habitat

Mapped critical habitat for the Carolina heelsplitter is found in three locations in Union County: the main stem of Goose Creek (Pee Dee River system), from the N.C. Highway 218 Bridge downstream to its confluence with the Rocky River; the main stem of Duck Creek, from the

Mecklenburg/Union County line downstream to its confluence with Goose Creek; and the main stem of Waxhaw Creek (Catawba River system), from the N.C. Highway 200 Bridge downstream to the North Carolina/South Carolina State line. As shown on the Heelsplitter Critical Habitat Figure (contained in Appendix 4), the Norkett Branch Stream Mitigation Site is over 16 miles from the mapped critical habitat locations and is not located upstream of any of the locations. Based on the proposed project's location, Wildlands determined that the Norkett Branch Site will have "no effect" on existing designated critical habitat.

6.4 Cultural Resources

6.4.1 Site Evaluation Methodology

The National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470), defines the policy of historic preservation to protect, restore, and reuse districts, sites, structures, and objects significant in American history, architecture, and culture. Section 106 of the NHPA mandates that federal agencies take into account the effect of an undertaking on any property that is included in, or is eligible for inclusion in, the National Register of Historic Places.

6.4.2 SHPO/THPO Concurrence

A letter was sent to the North Carolina State Historic Preservation Office (SHPO) on July 26, 2012, requesting review and comment for the potential of cultural resources potentially affected by the project. SHPO responded on August 20, 2012, and stated they were aware of no historic resources that would be affected by the project. All correspondence with SHPO is included in Appendix 4.

6.5 FEMA Floodplain Compliance and Hydrologic Trespass

Norkett Branch is mapped on Panel 5480 of the Union County FIRM floodplain mapping as shown on Figure 6. A limited detailed study has been performed by FEMA and NC Emergency Management on Norkett Branch. Norkett Branch is a mapped Zone AE floodplain but a floodway has not been delineated. A detailed hydraulic study has been performed and base flood elevations have been defined by FEMA and NC Emergency Management.

Due to the Priority 1 approach on Norkett Branch within the mapped Zone AE, the proposed 100-year water surface elevations will be slightly higher than the existing 100-year water surface elevations. A Conditional Letter of Map Revision (CLOMR) with detailed hydraulic modeling will be required prior to construction. The CLOMR has been submitted to the Union County Floodplain Administrator for approval. If required, a Letter of Map Revision (LOMR) will be submitted after the project is constructed in order to revise the maps to accurately reflect the project area. A Floodplain Check List is included in Appendix 7. The project will be designed to avoid adverse floodplain impacts on adjacent properties or adjacent roadways.

6.6 Utilities and Site Access

There are no known utilities or easements within the project area. The site is accessible from Philadelphia Church Road.

7.0 Reference Sites

7.1 Reference Streams

Four reference reaches were used to support the design of the project reaches (Figure 9). Reference reaches can be used as a basis for design or, more appropriately, as one source of information on which to base a stream restoration design. Most, if not all, reference reaches identified in the North Carolina Piedmont are in heavily wooded areas and the mature vegetation contributes greatly to their stability. Design parameters for this project were also developed based on the design discharge along with dimensionless ratio values associated with successful restoration designs of streams in the North Carolina Piedmont. Reference reach data for similar streams were obtained from existing data sets and used to verify design parameters. Two reference sites were used as discharge references, Dutchman's Creek gage and UT to Richland Creek Reach 1, as discussed in Section 5.5. The reference streams considered when developing cross section, profile and pattern parameters for this project include Spencer Creek, UT to Spencer Creek, and UT to Richland Creek Reach 2. The Dutchman's Creek site, Spencer Creek and UT to Spencer Creek site are located within the Carolina Slate Belt. The UT to Richland Creek sites are located on the border of the Carolina Slate Belt and the Triassic Basin Lithologic Belt. These reference streams were chosen because of similarities to the project streams including drainage area, valley slope and morphology, bed material, and location within or closely bordering the Carolina Slate Belt region of the Piedmont.

7.1.1 Reference Streams Channel Morphology and Classification

Dutchman's Creek is located on the western edge of Montgomery County, west of Albemarle, NC. Wildlands collected three cross sections and longitudinal profile representative of the reference reach. The drainage area is 2.90 square miles and the land use within the drainage area is forest. The Dutchman's Creek reference site was classified as a B4 channel type. The channel has a width to depth ratio ranging from 16.7 to 19.4 and an entrenchment ratio of 1.9. The reach has a channel slope of 0.0093 ft/ ft.

UT to Spencer Creek is located in western Montgomery County near the crossroads of Ophir, NC. This reach flows through a mature forest and has a drainage area of 0.014 square miles. According to the UT to Barnes Creek Restoration Plan, the reach had a valley slope of 0.0081 ft/ ft and a channel slope of 0.0033 ft/ft. Morphological parameters reported for the riffle cross section include a width to depth ratio of 6.4 and entrenchment ratio of 11.6 (Buck Engineering, 2004).

Spencer Creek is less than two miles from the Spencer Creek reference site (Buck Engineering, 2004). This site was classified as an E4 stream type and has a drainage area of 0.96 square miles. This reach flows through a mature forest and has a valley slope of 0.011 ft/ ft and a channel slope of 0.0047 ft/ ft. The morphological parameters reported for the riffle cross section include a width to depth ratio from 5.8 to 7.1 and an entrenchment ratio of 5.5 and 10.2.

UT to Richland Creek is the final reference reach used for this project. The site is located approximately 10 miles west of Carthage, NC in north-central Moore County. The stream was originally identified as a reference site for the Collins Creek Restoration plan by KCI Technologies (2007). Two reference sites on the stream were surveyed by Wildlands in January 2012.

UT to Richland Creek Reach 1 has a drainage area of 0.28 square miles and the land use within the drainage area is approximately 10-year-old timber regrowth. The reach was classified as a C4/E4 stream type with a low sinuosity. Reach 1 includes a stable riffle/run sequence that was used as a discharge reference.

Reach 2 of UT to Richland Creek has a drainage area of 0.97 square miles and the land use within the drainage area is 10-year-old timber regrowth. The reach was classified as a C4/E4 stream type with a low sinuosity of approximately 1.1. Three riffle and two pool cross sections were surveyed along with approximately 700 linear feet of profile. The channel has a width to depth ratio ranging from 10.1 to 13.9 and an entrenchment ratio greater than 2.5. The reach has a valley slope of 0.016 ft/ft and a channel slope of 0.014 ft/ ft. The d_{50} for the reach is in the gravel fraction.

The reference reaches have width to depth ratios in the C to E range depending on the particular cross section considered. There is often considerable variability of the widths and depths of a stable natural channel, even within a morphologically similar reach. This is very common of smaller Piedmont streams. Summaries of geomorphic parameters for the reference reaches analyzed for this project are included in Table 10.

Table 10. Summary of Reference Reach Geomorphic Parameters
Norkett Branch Stream Mitigation Site

			UT to Spencer Creek		Spencer Creek		UT to Richland Creek R2	
Parameter	Notation	Units	min	max	min	max	min	max
stream type			E5		E4		C4/E4	
drainage area	DA	sq mi	0.014		0.96		0.97	
bankfull discharge	Q_{bkf}	cfs	25		97		68.9	78.6
bankfull cross-sectional area	A_{bkf}	SF	7.7		17.8	19.7	16.5	17.5
average velocity during bankfull event	v_{bkf}	fps	3.2		4.9	5.4	4.2	4.5
Cross-Section								
width at bankfull	w_{bkf}	feet	7.0		10.7	11.2	13.3	15.2
maximum depth at bankfull	d_{max}	feet	2.0		2.1	2.6	1.8	2.1
mean depth at bankfull	d_{bkf}	feet	1.1		1.6	1.8	1.1	1.3
bankfull width to depth ratio	w_{bkf}/d_{bkf}		6.4		5.8	7.1	10.1	13.9

			UT to Spencer Creek		Spencer Creek		UT to Richland Creek R2	
Parameter	Notation	Units	min	max	min	max	min	max
depth ratio	d_{max}/d_{bkf}		1.8		1.3	1.4	1.6	1.7
bank height ratio	BHR		1.0		1.0		1.0	
floodprone area width	w_{fpa}	feet	>81		60	>114	>50	
entrenchment ratio	ER		>11.6		5.5	>10.2	>2.5	
Slope								
valley slope	S_{valley}	ft/ft	0.0081		0.0109		0.016	
channel slope	$S_{channel}$	ft/ft	0.0033		0.0047		0.014	
Profile								
riffle slope	S_{riffle}	ft/ft	0.014		0.013		0.0183	0.0355
riffle slope ratio	$S_{riffle}/S_{channel}$		4.2		2.8		1.3	2.5
pool slope	S_{pool}	ft/ft	0.0013	0.0014	0.0007	0.0009	0.0003	0.0038
pool slope ratio	$S_{pool}l/S_{channel}$		0.4	0.4	0.2	0.2	0.0	0.3
pool-to-pool spacing	L_{p-p}	feet	19	41.7	71		33	93
pool spacing ratio	L_{p-p}/w_{bkf}		2.7	6.0	6.3	6.6	2.5	6.1
pool cross-sectional area at bankfull	A_{pool}	SF	8.8		24.5		14.7	15.8
pool area ratio	A_{pool}/A_{bkf}		1.1		1.2	1.4	0.9	0.9
maximum pool depth at bankfull	d_{pool}	feet	2.5		3.3		1.8	1.8
pool depth ratio	d_{pool}/d_{bkf}		2.3		1.8	2.0	1.4	1.6
pool width at bankfull	w_{pool}	feet	6.5		17.5		14.7	16
pool width ratio	w_{pool}/w_{bkf}		0.9		1.6	1.6	1.0	1.2
Pattern								
sinuosity	K		2.5		2.3		1.1	
belt width	w_{blt}	feet	11	27	38	41	N/A	
meander width ratio	w_{blt}/w_{bkf}		1.6	3.8	3.4	3.6	N/A	
meander length	L_m	feet	37.7	43	46	48	N/A	

			UT to Spencer Creek		Spencer Creek		UT to Richland Creek R2	
Parameter	Notation	Units	min	max	min	max	min	max
meander length ratio	L_m/w_{bkf}		5.4	6.1	4.1	4.4	N/A	
radius of curvature	R_c	feet	6	16	11	15	N/A	
radius of curvature ratio	R_c/ w_{bkf}		0.8	2.3	1.3	1.4	N/A	

Notes:

N/A: Data not available.

7.1.2 Reference Streams Vegetation Community Types Descriptions

Spencer Creek, UT to Spencer Creek and Dutchman's Creek reference sites are surrounded by mature hardwood forests within the Uwharrie National Forest. Vegetation at the Spencer Creek and UT to Spencer Creek are composed of typical Piedmont bottomland forest tree species. Dominant species include sweet gum (*Liquidambar styraciflua*), tulip poplar (*Liriodendron tulipifera*), red maple (*Acer rubrum*), hackberry (*Celtis occidentalis*), and American elm (*Ulmus Americana*). Common understory vegetation includes ironwood (*Carpinus caroliniana*), American holly (*Ilex opaca*), paw paw (*Asimina triloba*), and flowering dogwood (*Cornus florida*). The Dutchman's Creek site is classified as a Mesic Mixed Hardwood Forest (Schafale & Weakley, 1990). Dominant species include American beech (*Fagus grandifolia*), Northern Red Oak (*Quercus rubra*), tulip poplar, and red maple. Understory vegetation includes American holly, red maple, and flowering dogwood. In addition, rhododendron species were present and dense along portions of the reach.

According to the Collins Creek Restoration Plan (KCI, 2007) portions of the UT to Richland Creek site are classified as a Piedmont Alluvial Forest and/or Mesic Mixed Hardwood Forest (Schafale & Weakley, 1990). Representative canopy species within a Piedmont Alluvial Forest include river birch (*Betula nigra*), green ash (*Fraxinus pennsylvanica*), sycamore (*Platanus occidentalis*), sweet gum, sugarberry (*Celtis laevigata*), black walnut (*Juglans nigra*), shagbark hickory (*Carya ovate*), American elm, and tulip poplar. Species that dominant the understory are ironwood, paw paw, American holly, spicebush (*Lindera benzoin*), and painted buckeye (*Aesculus sylvatica*) (Schafale & Weakley, 1990). These mature species within these riparian vegetation communities provide a large portion of the vertical and horizontal stabilizing force for these reference reach systems.

8.0 Determination of Credits

8.1 Stream Mitigation Credits

Mitigation credits presented in Table 11 are projections based upon site design. Upon completion of site construction the project components and credits data will be revised to be consistent with the as-built condition.

Table 11. Determination of Credits

Norkett Branch Stream Mitigation Site

Norkett Branch Stream Mitigation Site, Union County, DENR Contract 004673									
Mitigation Credits									
	Stream		Riparian Wetland		Non-riparian Wetland		Buffer	Nitrogen Nutrient Offset	Phosphorus Nutrient Offset
Type	R	RE	R	RE	R	RE			
Totals	9,048	881	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Project Components							
Project Component or Reach ID	Stationing / Location	Existing Footage (LF)	Approach (P1, P2, etc.)	Restoration or Restoration Equivalent	Restoration Footage (LF)	Mitigation Ratio	Proposed Credit (SMU)
Norkett Branch Reach 1	100+31 - 117+60; 118+61 - 124+00	1,980	P1	Restoration	2,268	1:1	2,268
Norkett Branch Reach 2	124+00 - 131+84; 132+25 - 138+99	1,505	P1	Restoration	1,458	1:1	1,458
UT1	200+00 - 211+98	840	P1	Restoration	1,198	1:1	1,198
UT2 Reach 1	300+00 - 304+72; 305+32 - 310+80	820	P1	Restoration	1,020	1:1	1,020
UT2 Reach 2	310+80 - 321+71; 322+06 - 325+20	1,272	P1	Restoration	1,405	1:1	1,405
UT2 Reach 3A	325+20 - 335+58	923	P1	Restoration	1,038	1:1	1,038
UT2 Reach 3B	336+87 - 343+48	380	P1/ P2 transition	Restoration	661	1:1	661
UT2A	401+54 - 411+06; 411+43 - 414+87	1,296	cattle exclusion, buffer planting, minimal structures and bank grading	Enhancement II	1,296	2.5:1	518
UT3	505+42 - 507+05	163	cattle exclusion, buffer planting, minimal structures and bank grading	Enhancement II	163	2.5:1	65
WQ BMP 1	upstream of UT3 intermittent drainage	N/A	Step Pool Stormwater Conveyance	WQ BMP	29.7 ac treated	1:8	238
WQ BMP 2	non-jurisdictional drainage in eastern Norkett Branch floodplain	N/A	Pocket Wetland	WQ BMP	19.9 ac treated	1:3	60

Component Summation						
Restoration Level	Stream (LF)	Riparian Wetland (acres)		Non-Riparian Wetland (acres)	Buffer (square feet)	Upland (acres)
		Riverine	Non-Riv.			
Restoration	9,048	N/A	N/A	N/A		N/A
Enhancement	N/A	N/A	N/A	N/A	N/A	N/A
Enhancement I	N/A	N/A	N/A	N/A	N/A	N/A
Enhancement II	1,459	N/A	N/A	N/A	N/A	N/A
Alternative Mitigation	49.6 ac treated	N/A	N/A	N/A	N/A	N/A
Creation	N/A	N/A	N/A	N/A	N/A	N/A
Preservation	N/A	N/A	N/A	N/A	N/A	N/A
High Quality Preservation	N/A	N/A	N/A	N/A	N/A	N/A

8.2 BMP Credit Method

Mitigation credits for the BMPs take into account the size and land use of the watershed and the expected pollutant removal rates expected of the BMPs. The three pollutants considered during the development of the BMP mitigation credit ratio were Total Suspended Solids (TSS), Total Nitrogen (TN), and Total Phosphorus (TP). Table 12 lists pollutant loading rates for land uses typically adjacent to NCEEP projects. TSS loading rates were taken from CH2M Hill's

"Urban Stormwater Pollutant Assessment" (CH2M Hill, 2000). TN and TP loading rates (mg/L) from the Tar-Pamlico nutrient export worksheet (NCDWQ, 2003) were used to establish lbs/ac/yr loading rates for the three land uses.

Table 12. Pollutant Loading Rates
Norkett Branch Stream Mitigation Site

Land Use	TSS Loading (lbs/ac/yr)	TN Loading (lbs/ac/yr)	TP Loading (lbs/ac/yr)
Woods	190	0.43	0.06
Pasture	200	0.94	0.29
Cropland	200	1.95	0.57

Expected BMP pollutant removal rates were adapted from the "Stormwater BMP Manual" (NCDWQ, 2007), "Accounting For Stormwater Wasteload Allocations And Impervious Acres Treated" (MDE, 2011), "National Pollutant Removal Performance Database for Stormwater Treatment Practices, 2nd Edition" (CWP, 2000), and the "Stormwater Wetland Factsheet" (EPA, 2012). Table 13 summarizes the expected pollutant removal rates for typical BMPs.

Table 13. BMP Pollutant Removal Rates
Norkett Branch Stream Mitigation Site

BMP Type	TSS Removal Rate	TN Removal Rate	TP Removal Rate
Wet Pond	85%	25%	40%
Constructed Wetland	85%	40%	35%
Pocket Wetland	60%	20%	45%
Grass Swale	35%	20%	20%
Dry Detention	50%	10%	10%
Riparian Buffer with Level Spreader	60%	30%	30%
Step Pool Storm Conveyance	85%	40%	40%

In order to bracket expected pollutant removal in lbs/ac/yr, two scenarios were analyzed: a watershed with low pollutant loading (woods) combined with the lowest expected removal rates and a watershed with high pollutant loading (cropland) combined with the highest expected pollutant removal rates. Tables 14 - 16 summarize the expected pollutant removal for each scenario.

Table 14. Expected TSS Removal
Norkett Branch Stream Mitigation Site

Land Use	TSS Loading (lbs/ac/yr)	TSS Removal Rate	Expected TSS Removal (lbs/ac/yr)
Woods	190	35%	66.5
Cropland	200	85%	170

Table 15. Expected TN Removal
Norkett Branch Stream Mitigation Site

Land Use	TN Loading (lbs/ac/yr)	TN Removal Rate	Expected TN Removal (lbs/ac/yr)
Woods	0.43	10%	0.04
Cropland	1.95	40%	0.78

Table 16. Expected TP Removal
Norkett Branch Stream Mitigation Site

Land Use	TP Loading (lbs/ac/yr)	TP Removal Rate	Expected TP Removal (lbs/ac/yr)
Woods	0.06	10%	0.01
Cropland	0.57	40%	0.23

Mitigation credit ratios were then established according to the expected pollutant removal ranges as shown in Table 17. The mitigation credit ratios are defined as DA:SMU, where DA equals acres of contributing drainage area to the BMP. The low values of the 1:3 removal range were set greater than a 100% wooded drainage area. This prevents mitigation credit for BMPs that only treat wooded or forested areas. The low values were established through iterative land use/BMP scenarios and correspond to drainage areas that are at least 30% non-wooded.

Table 17. BMP Removal Ranges and Credit Ratios
Norkett Branch Stream Mitigation Site

DA:SMU	Sub-Score	TSS Removal Range (lbs/ac/yr)		TN Removal Range (lbs/ac/yr)		TP Removal Range (lbs/ac/yr)	
		Low	High	Low	High	Low	High
1:3	1	70	120	0.06	0.29	0.02	0.08
1:5.5	2	121	169	0.30	0.54	0.09	0.15
1:8	3	170	200	0.55	0.78	0.16	0.23

A sub-score value is assigned to each removal range. The total score determines the overall mitigation credit ratio according to Table 18.

Table 18. Score Ranking
Norkett Branch Stream Mitigation Site

Total Score	Overall Mitigation Credit Ratio
3 - 4	1:3
5 - 7	1:5.5
8 - 9	1:8

Since determination of the mitigation credit ratio is based on the expected pollutant removal per acre, this approach takes into account the size and land use of the contributing drainage area in addition to the BMP removal rate. This approach also allows flexibility for determining BMP mitigation credit ratios when one pollutant is a greater concern than another.

8.3 Site BMP Credit Calculations

Tables 19 and 20 summarize the pollutant loading and removal and resulting mitigation credit ratio for each BMP at the Norkett Branch Stream Mitigation Site. Two sets of data are entered in order to determine pollutant removal and the corresponding ratio. The first step is to enter the land use areas of the contributing drainage area. The second step is to select the type of BMP and enter the BMP removal rates.

Table 19. WQ BMP 1 Pollutant Loading and Removal
Norkett Branch Stream Mitigation Site

WQ BMP 1 - SPSC				
Land Use	**Area (ac)**	**TSS Loading (lbs/ac/yr)**	**TN Loading (lbs/ac/yr)**	**TP Loading (lbs/ac/yr)**
Woods	4.5	190	0.43	0.06
Pasture	2.8	200	0.94	0.28
Cropland	22.4	200	1.95	0.57
TOTAL	**29.70**	**198.5**	**1.62**	**0.47**
BMP Type		SPSC		
BMP Removal Rate		85%	40%	40%
Expected Pollutant Removal (lbs/ac/yr)		**169**	**0.65**	**0.19**
Removal Range Ratio		**1:6**	**1:8**	**1:8**
Sub-Score		**2**	**3**	**3**
Total Score		**8**	Manually Entered Fields	
Overall Mitigation Credit Ratio		**1:8**		

Table 20. WQ BMP 2 Pollutant Loading and Removal
Norkett Branch Stream Mitigation Site

WQ BMP 2 - Pocket Wetland				
Land Use	**Area (ac)**	**TSS Loading (lbs/ac/yr)**	**TN Loading (lbs/ac/yr)**	**TP Loading (lbs/ac/yr)**
Woods	14.3	190	0.43	0.06
Pasture	5.5	200	0.94	0.29
Cropland	.01	200	1.94	0.57
TOTAL	**19.9**	**192.8**	**0.58**	**0.13**
BMP Type		Pocket Wetland		
BMP Removal Rate		60%	20%	45%
Expected Pollutant Removal (lbs/ac/yr)		**116**	**0.12**	**0.06**
Removal Range Ratio		**1:3**	**1:3**	**1:3**
Sub-Score		**1**	**1**	**1**
Total Score		**3**		
Overall Mitigation Credit Ratio		**1:3**		

Manually Entered Fields

A mitigation credit ratio of 1:8 is proposed for WQ BMP 1- SPSC while a mitigation credit ratio of 1:3 is proposed for W BMP 2- Pocket Wetland. These ratios are applicable since WQ BMP 1- SPSC is treating a larger portion of cropland while WQ BMP 2- Pocket Wetland is treating a larger portion of woods. A higher credit ratio for BMPs that remove more pollutants is appropriate. Multiplying the BMP mitigation credit ratios by their respective drainage areas results in 238 SMUs for WQ BMP 1- SPSC and 60 SMUs for WQ BMP 2- Pocket Wetland.

The BMP credit proposal resulting in 238 SMUs for the Step Pool Stormwater Conveyance and 60 SMUs for the pocket wetland was discussed at the March 12, 2013, EEP/ IRT meeting. It was clarified that the BMPs will not be located in areas of jurisdictional streams or wetlands. The IRT made it clear that this was a case-by-case approval and not a method the IRT would necessarily accept on a different project. A summary of these comments is provided in Appendix 4.

9.0 Project Site Mitigation Plan

9.1 Design Channel Summary

The design streams will be restored to the appropriate type based on the surrounding landscape, climate, and natural vegetation communities but also with strong consideration to existing watershed conditions and trajectory. The project includes stream restoration and enhancement as well as water quality treatment BMPs as shown in Figure 10. The specific proposed stream and BMP types are described below.

The stream restoration portion of this project includes Norkett Branch Reach 1 and Reach 2, UT1, and UT2. Norkett Branch Reaches 2A and 2B are combined into design reach 2 because after the removal of the collapsed bridge crossing, slope and design parameters will be consistent between Reach 2A and 2B, eliminating the need for differentiation. Enhancement II is proposed on the intermittent channels UT2A and UT3. Storm water BMPs will be implemented to treat drainage upstream of UT3 and for a drainage in the right floodplain of the downstream end of Norkett Branch Reach 2.

All stream restoration reaches included in the design for this project will be constructed as C/E type streams according to the Rosgen classification system (Rosgen, 1996). C/E streams are meandering streams with well-developed floodplains and gentle average gradients of 2% or less. C/E streams occur within a wide range of valley types and are appropriate for the project landscape.

The morphologic design parameters as shown in Tables 21A and 21B fall within the ranges specified for C/E streams (Rosgen, 1996). The specific values for the design parameters were selected based on designer experience and judgment and were supported by morphologic data from reference reach data sets. The width to depth ratios range from 11.2 to 13.9 and, for most of the reaches, are approximately 12. A width to depth ratio in the 10 to 14 range is the delineating line between the C and E stream type. We expect that over time as vegetation is established, the channels may narrow more toward dimensions characteristic of an E channel. This narrowing over time would not be seen as an indicator of instability in and of itself.

The design channel slopes of the restoration reaches ranged from 0.0015 to 0.017 ft/ft. Each of the design reaches will be reconnected with the existing floodplain (Priority 1) with the exception of UT2 Reach 3B which will transition from a Priority 1 to a Priority 2 condition. UT2 Reach 3B is controlled by the downstream culvert invert at Philadelphia Church Road on the upstream end and the proposed floodplain and channel elevations of Norkett Branch at the downstream end. The hydraulic capacity of the Philadelphia Church Road culvert will not allow this crossing to be raised to accommodate a Priority 1 approach on the full length of UT2 Reach 3B. The restored channels will have entrenchment ratios greater than 2.2. The sinuosity for the restored channels is proposed to be in the range of 1.2 to 1.3.

Table 21A. Design Morphologic Parameters- Norkett Branch and UT1
Norkett Branch Stream Mitigation Site

	Notation	Units	Norkett Branch Reach 1			Norkett Branch Reach 2			UT1		
			Typical Section Values	Min	Max	Typical Section Values	Min	Max	Typical Section Values	Min	Max
stream type			C4			C5			C/E6		
drainage area	DA	sq mi	2.3			3.2			0.08		
design discharge	Q	cfs	110			140			12		
bankfull cross-sectional area	A_{bkf}	SF	40.6			43.2			4.6		
average velocity during bankfull event	v_{bkf}	fps	2.8			3.3			2.6		
Cross-Section											
width at bankfull	w_{bkf}	feet	22			23			7.5		
maximum depth at bankfull	d_{max}	feet	2.75			2.75			0.9		
mean depth at bankfull	d_{bkf}	feet	1.8			1.9			0.6		
bankfull width to depth ratio	w_{bkf}/d_{bkf}		11.9			12.2			12.2		
low bank height		feet	2.75			2.75			0.9		
bank height ratio	BHR		1.0			1.0			1.0		
floodprone area width	w_{fpa}	feet		48.4	110+		50.6	115+		16.5	38+
entrenchment ratio	ER			2.2	5.0+		2.2	5.0+		2.2	5.0+
Slope											
valley slope	S_{valley}	ft/ft	0.0027			0.0037			0.015		
channel slope	S_{ch}	ft/ft	0.0026	0.0015	0.0033	0.0036	0.0023	0.0052	0.0102	0.0072	0.013
Profile											
riffle slope	S_{riffle}	ft/ft		0.0018	0.012		0.0023	0.018		0.013	0.045

	Notation	Units	Norkett Branch Reach 1			Norkett Branch Reach 2			UT1		
			Typical Section Values	Min	Max	Typical Section Values	Min	Max	Typical Section Values	Min	Max
riffle slope ratio	S_{riffle}/S_{ch}			1.2	3.5		1.2	3.5		1.2	3.4
pool slope	S_p	ft/ ft		0.000	0.0013		0.000	0.0021		0.000	0.0053
pool slope ratio	S_p/S_{ch}			0.00	0.40		0.00	0.40		0.00	0.40
pool-to-pool spacing	L_{p-p}	feet		29	163		30	170		10	56
pool spacing ratio	L_{p-p}/w_{bkf}			1.3	7.4		1.3	7.4		1.3	7.4
pool cross-sectional area		SF		48	96		51	103		6	8
pool area ratio				1.2	2.4		1.2	2.4		1.3	1.8
maximum pool depth		feet		2.8	7.8		2.8	7.9		0.9	2.6
pool depth ratio				1.5	4.2		1.5	4.2		1.5	4.2
pool width at bankfull		feet	27.0			28.0			9.0		
pool width ratio			1.2			1.2			1.2		
Pattern											
sinuosity	K			1.24			1.20			1.20	
belt width	w_{blt}	feet		35	161		37	168		12	55
meander width ratio	w_{blt}/w_{bkf}			1.6	7.3		1.6	7.3		1.6	7.3
meander length	L_m	feet		66	264		69	276		23	90
meander length ratio	L_m/w_{bkf}			3.0	12.0		3.0	12.0		3.0	12.0
radius of curvature	R_c	feet		40	66		41	69		12	23
radius of curvature ratio	R_c/ w_{bkf}			1.8	3.0		1.8	3.0		1.6	3.0

Table 21B. Design Morphologic Parameters- UT2
Norkett Branch Stream Mitigation Site

	Notation	Units	UT2 Reach 1			UT2 Reach 2			UT2 Reach 3A			UT2 Reach 3B		
			Typical Section Values	Min	Max	Typical Section Values	Min	Max	Typical Section Values	Min	Max	Typical Section Values	Min	Max
stream type			C/E4			C/E4			C/E4			C/E4		
drainage area	DA	sq mi	0.15			0.22			0.46			0.46		
design discharge	Q	cfs	11			17			26			33		
bankfull cross-sectional area	A_{bkf}	SF	4.6			5.3			6.9			10.8		
average velocity during bankfull event	v_{bkf}	fps	2.4			3.2			3.7			3.0		
Cross-Section														
width at bankfull	w_{bkf}	ft	8.0			8.0			9.0			11.0		
maximum depth at bankfull	d_{max}	ft	0.9			1.0			1.2			1.5		
mean depth at bankfull	d_{bkf}	ft	0.6			0.7			0.8			1.0		
bankfull width to depth ratio	w_{bkf}/d_{bkf}		13.9			12.1			11.7			11.2		
low bank height		ft	0.9			1.0			1.2			1.5		
bank height ratio	BHR		1.0			1.0			1.0			1.0		
floodprone area width	w_{fpa}	ft	40+			40+			45+			55+		
entrenchment ratio	ER		5.0+			5.0+			5.0+			5.0+		
Slope														
valley slope	S_{valley}	ft/ ft	0.0063			0.0086			0.0079			0.0047		
channel slope	S_{ch}	ft/ ft	0.005	0.0048	0.0076	0.007	0.0048	0.017	0.006	0.0057	0.0076	0.0040		
Profile														
riffle slope	S_{riffle}	ft/ ft		0.010	0.032		0.013	0.028		0.011	0.032		0.0080	0.017
riffle slope ratio	S_{riffle}/S_{ch}			2.0	4.2		2.0	4.2		2.0	4.2		2.0	4.2

	Notation	Units	UT2 Reach 1			UT2 Reach 2			UT2 Reach 3A			UT2 Reach 3B		
			Typical Section Values	Min	Max	Typical Section Values	Min	Max	Typical Section Values	Min	Max	Typical Section Values	Min	Max
pool slope	S_p	ft/ ft		0	0.001		0.000	0.0013		0.000	0.0013		0.000	0.0008
pool slope ratio	S_p/S_{ch}			0.00	0.20		0.00	0.20		0.00	0.20		0.00	0.20
pool-to-pool spacing	L_{p-p}	ft		10	56		10	56		12	63		14	77
pool spacing ratio	L_{p-p}/w_{bkf}			1.3	7.0		1.3	7.0		1.3	7.0		1.3	7.0
pool cross-sectional area		SF		7	9		7	9		10	12		14	18
pool area ratio				1.4	1.9		1.2	1.7		1.4	1.7		1.3	1.6
maximum pool depth		ft		0.9	2.4		1.0	2.8		1.2	3.2		1.5	4.1
pool depth ratio				1.5	4.2		1.5	4.2		1.5	4.2		1.5	4.2
pool width at bankfull		ft	9.0			9.0			10.0			12.0		
pool width ratio			1.1			1.1			1.1			1.1		
Pattern														
sinuosity	K		1.20			1.30			1.25			1.20		
belt width	w_{blt}	ft		13	44		13	44		14	50		18	61
meander width ratio	w_{blt}/w_{bkf}			1.6	5.5		1.6	5.5		1.6	5.5		1.6	5.5
meander length	L_m	ft		24	96		24	96		27	108		33	132
meander length ratio	L_m/w_{bkf}			3.0	12.0		3.0	12.0		3.0	12.0		3.0	12.0
radius of curvature	R_c	ft		13	24		13	24		14	27		20	33
radius of curvature ratio	R_c/ w_{bkf}			1.6	3.0		1.6	3.0		1.6	3.0		1.8	3.0

9.2 Target Buffer Communities

The target communities for the restored riparian buffer zones will be based on the following:

- Reference conditions from forested areas at the reference reaches used in this project;
- Native trees with proven success in early successional restoration sites;
- Vegetation listed for these community types in Classification of the Natural Communities of North Carolina (Schafale and Weakley,1990); and
- Consultation with native tree suppliers.

Species documented at the reference reach sites are described in Section 7.1.2.

9.3 Design Justification

Based on assessments of the watershed and existing channels, the project design has been developed to address stream degradation caused primarily by livestock access, agricultural practices, and anthropogenic modifications. The existing conditions assessment of the project reaches of Norkett Branch and its tributaries included in the project area indicated that the stressors listed above have resulted in degraded stream conditions as evidenced through bank erosion, ditching and straightening, bank and bed trampling, incision, and over widening. In addition, the majority of the riparian buffers have been maintained in either pasture or row crops. There are few canopy trees and the narrow band of scrub-shrub vegetation along portions of Norkett Branch is largely comprised of non-native species. The result is reduced stream and floodplain function, low value aquatic habitat and net sediment, nutrient, and pathogen export to downstream receiving waters.

Norkett Branch Reach 1, UT1, and UT2 Reaches 1 and 3B are located in row crops moderately incised and straightened as a result of maintenance for agricultural purposes. The stream beds generally lack riffle/pool morphology; moderate to severe bank erosion is evident throughout the reaches. The channels are currently in late Stage III and early Stage IV as evidenced by widening, formation of lateral deposition, and development of minor pattern at the base flow stage. However, ongoing maintenance to promote agricultural drainage and maximize usable field acreage interrupts this process every few years. Without intervention, these systems will continue to cycle through disturbance, partial recovery, and re-disturbance.

Norkett Branch Reach 2, UT2 Reaches 2 and 3A, and UT2A are located in active cattle pastures. The stream beds generally lack riffle/ pool morphology and the banks and beds have been trampled and de-stabilized by livestock encroachment. Bank height ratios vary along UT2 indicating minimal to severe incision. Bank height ratios for Norkett Branch Reach 2 and UT2A indicate moderate to severe incision. There is not strong evidence of channel adjustment processes in the reaches largely due to the continual impact of livestock encroachment. Without intervention, these systems will stay in a degraded state and not be able to adjust or recover.

UT3 drains 29.7 acres and the adjacent downstream ephemeral channel drains 19.9 acres of active agricultural production fields and cattle pasture. These drainageways channel nitrogen and phosphorus fertilizer runoff, cattle waste, and trampled bank sediments directly into Norkett Branch and the receiving waters of 303(d)-listed Lanes Creek. The water quality BMPs proposed for these drainage areas directly target the watershed stressors identified in the RBRP and DWQ reports.

If livestock and row cropping were removed and buffers were not managed, eventually Norkett Branch and its tributaries may recover to stable C or E streams. The incised reaches would stabilize at a lower position relative to the valley floor and be cut off from the original

floodplain. During this decades-long recovery process, the streams would continue to export sediment and nutrients and have impaired habitat conditions. However, with continued livestock access, agricultural ditching, management of buffers, and no bank / bed stabilization treatments, the streams will not stabilize and will continue to export sediment, nutrients, and pollutants to downstream receiving waters.

The project goals and objectives were developed to address the stressors and impairments described in the paragraphs above. To summarize, the key factors driving the need for this intervention are:

- Treatment of agricultural runoff directly supports the Lower Yadkin- Pee Dee River Basin Restoration Priority (RBRP) plan and 2008 DWQ Basinwide Water Quality Report as they relate to agricultural based water quality impairments, nutrient loading, turbidity, and fecal coliform bacteria. Without intervention, it is likely that downstream sediment, nutrient, and pollutant impacts will continue to occur.
- The restoration, enhancement, and buffer enhancement efforts will reduce on-site nutrient, sediment, and pollutant inputs by removing row crops and cattle and filtering on-site runoff through buffer zones. Off-site nutrient input will be absorbed on-site by filtering flood flows through restored floodplain areas, where flood flow will spread through native vegetation.
- The intervention will provide functional improvements to the ecosystem by restoring riffle/pool sequences to promote aeration of water, lower water temperature, help maintain dissolved oxygen concentrations, and restore the aquatic, benthic, and riparian habitat.

9.4 Sediment Transport Analysis for Proposed Restoration Channels

A sediment transport analysis was performed for the restoration reaches including Norkett Branch, UT1, and UT2. In general, the analysis was performed primarily to address competence; that is, what size bed material particles will become entrained at flows at or near the design discharge. Based on the watershed assessment summarized earlier in this report, each of the site channels is supply limited and so the stream channels are expected to have adequate capacity to pass the limited sediment load being received from upstream drainage.

Sediment competence is an extremely important analysis to perform for stream channels with larger sized particles (gravels, cobbles, and boulders); however, streams with predominately fine grained particles generally have enough competence to move the supplied sediment. Because some of the onsite reaches have low slopes, Wildlands analyzed sediment competence despite the fine-grained nature of the onsite substrate to ensure that the stream could mobilize the particles.

One way to analyze sediment competence is to look at the dimensional shear stress of a channel. Dimensional shear stress (τ) is equal to the specific weight of water (γ = 62.4 lbs/ft^3) times the hydraulic radius of the bankfull channel (R (ft)) times the average water surface slope of the reach (S (ft/ft)):

$$\tau = \gamma * R * S$$

The Shield's curve describes the critical shear stress required to mobilize particles of a particular size. Flume studies with homogenous bed particles were used to develop the original Shield's curve. This curve has since been supplemented by others, including Dave Rosgen with the

Colorado data from natural, heterogeneous bedded streams (Rosgen, 2006). The Colorado data suggests that natural, heterogeneous bedded rivers can move larger particles than homogeneous bedded flumes with the same amount of shear stress. Because of the relatively homogeneous sized sediment found in the onsite stream beds, Wildlands used the calculated shear stresses for the onsite channels with the more conservative Leopold, Wolman, and Miller 1964 Shield's relationship presented in the National Engineering Handbook to predict the largest mobile particle size during a bankfull event (USDA, 2007). This size was then compared to the largest particle size of the subpavement samples to determine if the channel has enough shear stress to mobilize the sediment supplied by the watershed and observed in the channel.

Another method for assessing channel competence is calculated using the median substrate size of a stream bed. Critical dimensionless shear stress (τ^*ci) is the measure of force required to initiate general movement of particles in a bed of a given composition. At shear stresses exceeding this critical value, essentially all grain sizes are transported at rates in proportion to their presence in the bed (Wohl, 2000). τ^*ci can be calculated for gravelbed stream reaches using pavement and subpavement particle samples from a stable, representative riffle in the reach (Andrews, 1983). Critical dimensionless shear stress is calculated by a series of equations summarized by Jessup (Jessup, 2002; Rosgen, 2001).

Table 22 summarizes the dimensional shear stresses and sediment transport competency calculations for existing conditions on Norkett Branch, UT1, and UT2. The dimensional shear stress analysis indicates that Reach 1 of Norkett Branch is not significantly aggradational or degradational. Norkett Branch Reach 2 is indicated to be moderately to severely aggradational in the upstream extent of the reach, as is expected due to the low slope and backwater caused by the collapsed bridge crossing. Field observations show that the channel cross section is over wide in this area and has not filled in with aggrading sediment. This condition substantiates the watershed observations that upstream ponds trap and store much of the sediment load from the upstream drainage area. Downstream of the collapsed bridge crossing, the reach is estimated to be near to equilibrium between aggradation and degradation.

The dimensional shear stress analysis indicates that UT1 is moderately to severely degradational with shear stress, depth, and slope to move particles much larger than the sampled substrate. This reach is moderately to severely incised with bank height ratios in the 1.5 to 2.4 range.

The dimensional shear stress analysis indicates that UT2 is moderately aggradational through Reaches 1, 2, and 3. The existing conditions field assessment did not show signs of widespread aggradation. It is possible that non-mobile shallow fractured bedrock pieces were collected as part of the subpavement sampling which skewed the sediment assessment, and it is likely that the upstream pond's sediment storage depleted sediment supply to the reach. The Jessup critical depth and slope calculations indicate that UT2 Reach 3 is degradational.

Table 22. Existing Dimensional Shear Stress and Sediment Transport Analysis Norkett Branch Mitigation Site

Parameter	Norkett Branch			UT1	UT2		
	Reach 1	Reach 2A	Reach 2B		Reach 1	Reach 2	Reach 3
Bankfull Discharge (cfs)	110	140	140	12	11	17	26
Bankfull Area (square feet)	28.0-30.3	52.8	40.6	2.6-8.6	7.9	5.2	8.3
Bankfull Mean Depth (feet)	1.9-2.2	2.4	1.4	0.9-1.0	0.6	0.7	1.1
Mean Bankfull Velocity (cfs)	3.5-4.0	2.5	3.5	3.3-4.2	1.4	3.4	3.7
Channel Slope (ft/ ft)	0.0039	0.0013	0.0046	0.015	0.0040	0.012	0.0090
Boundary Shear Stress, τ (lbs/SF)	0.41-0.44	0.17	0.38	0.57-0.82	0.14	0.42	0.54
Subpavement d_{84} (mm)	8.4-22.2	34.4	11.7	0.22-8.7	32.5	21.8	15.5
Subpavement d_{100} (mm)	21.8-56.4	66	37.3	4.5-25.4	76.2	66.8	53.3
Largest Moveable Particle (mm) per Shield's Curve	20-40	8-15	20-35	30-70	5-12	20-40	30-45
Critical Depth (feet) (Jessup)	2.1	4.5	N/A	N/A	N/A	N/A	0.5
Depth (feet) to initiate movement of d_{100} (Dimensional)	3.0	10.8	1.7	0.07-0.37	3.92	1.15	1.24
Critical Slope (ft/ ft) (Jessup)	0.0038	0.0024	N/A	N/A	N/A	N/A	0.0041
Slope (ft/ ft) to initiate movement of d_{100} (Dimensional)	0.0053	0.0057	0.0056	0.0012-0.0055	0.028	0.024	0.012

*Drawn from best-fit line for Leopold, Wolman, and Miller 1964 data on Shield's curve (Figure 11-11) presented in the Rosgen Geomorphic Channel Design section of the National Engineering Handbook (USDA, 2007).

Table 23 summarizes the dimensional shear stresses and sediment transport competency calculations for proposed conditions on the restoration reaches. The dimensional shear stress analysis indicates that Reach 1 of Norkett Branch will function in equilibrium between aggradation and degradation. The Shield's curve relationship indicates that the channel will have enough shear stress to move the sampled subpavement d84 particle for both subpavement samples and the d100 particle from one of the two subpavement samples on the reach. The critical depth and slope calculations using the Jessup analysis method indicate that the design channel may be aggradational. Based on the watershed assessment, upstream ponds store much of the sediment transported from the contributing drainage area.

Norkett Branch Reach 2 is indicated to be somewhat aggradational by the dimensional shear stress analysis, but is estimated to have the shear stress needed to move the d84 of both subpavement samples and the d100 of one of the two samples. Critical depth and critical slope calculated using the Jessup analysis indicate that the reach will have sufficient dimensional characteristics to transport its sediment without aggradation or degradation.

The dimensional shear stress analysis for UT1 indicates that this design reach will be slightly degradational. The Shield's curve indicates that the channel has the shear stress needed to move the d100 subpavement particle. There is significantly more shear stress than needed to move the d100 of one of the subpavement samples, indicating a degradational condition, and approximately the stress needed to move the d100 of the other subpavement sample. Grade control structures such as riffles and log drops will be used to protect against vertical incision and degradation.

UT2 Reach 1 is indicated to be aggradational by the dimensional shear stress analysis. Shield's curve indicates that the design condition shear stress will not mobilize the d84 or d100 subpavement particle size. The location of this reach immediately below the UT2 pond means that nearly all of the sediment load from the watershed is expected to be stored in the pond and not reach the channel.

UT2 Reach 2 is indicated to be aggradational by the dimensional shear stress analysis. Shield's curve indicates that the design condition shear stress will mobilize the d84 subpavement particle size. Similar to UT2 Reach 1, the location of this reach below the UT2 pond means that nearly all of the sediment load from the watershed is expected to be stored in the pond and not reach the channel.

UT2 Reaches 3A and 3B are indicated to be aggradational by the dimensional shear stress analysis. Shield's curve indicates that the design condition shear stress will mobilize the d84 subpavement particle size. Critical depth and critical slope calculations using the Jessup analysis indicate that the design channel will have adequate dimensions to move its sediment load. The location of this channel below the UT2 pond means that nearly all of the sediment load from the watershed is expected to be stored in the pond and not reach the channel.

Although the majority of the proposed design reaches are predicted to be slightly aggradational, there is very little evidence of existing aggradation in these existing systems which are also predicted to be aggradational. This observation, along with the substantial pond storage in the project watersheds, supports the design of channels that show this tendency in the models.

Table 23. Proposed Dimensional Shear Stress and Sediment Transport Analysis Norkett Branch Mitigation Site

Parameter	Norkett Branch		UT1	UT2			
	Reach 1	Reach 2		Reach 1	Reach 2	Reach 3A	Reach 3B
Bankfull Discharge (cfs)	110	140	12	11	17	26	26
Bankfull Area (square feet)	40.6	43.2	4.6	4.6	5.3	6.9	10.8
Bankfull Mean Depth (feet)	1.8	1.9	0.6	0.6	0.7	0.8	1.0
Mean Bankfull Velocity (fps)	3.1	2.8	2.5	2.4	3.2	3.7	3.0
Channel Slope (ft/ ft)	0.0025	0.0036	0.010	0.0052	0.0067	0.0063	0.0040
Boundary Shear Stress, τ (lbs/SF)	0.28	0.40	0.38	0.18	0.27	0.29	0.23
Subpavement d_{84} (mm)	8.4-22.2	11.7-34.4	0.22-8.7	32.5	21.8	15.5	15.5
Subpavement d_{100} (mm)	21.8-56.4	37.3-66.0	4.5-25.4	76.2	66.8	53.3	53.3
Largest Moveable Particle (mm) per Shield's Curve*	15-25	20-35	20-35	10-20	15-25	15-25	12-20
Critical Depth (feet) (Jessup)	3.3	1.6	N/A	N/A	N/A	0.7	1.1
Depth (feet) to initiate movement of d_{100} (Dimensional)	1.9-4.7	3.8	0.84-0.96	3.0	2.1	1.8	2.8
Critical Slope (ft/ ft) (Jessup)	0.0046	0.0030	N/A	N/A	N/A	0.0056	0.0030
Slope (ft/ ft) to initiate movement of d_{100} (Dimensional)	0.0026-0.0065	0.0072	0.014-0.016	0.028	0.022	0.015	0.012

*Drawn from best-fit line for Leopold, Wolman, and Miller 1964 data on Shield's curve (Figure 11-11) presented in the Rosgen Geomorphic Channel Design section of the National Engineering Handbook (USDA, 2007).

9.5 Project Implementation Summary

The stream restoration will be constructed as described in this section. Preliminary design plans are included with this mitigation plan for review.

9.5.1 Site Grading, Structure Installation, and Other Project Related Construction

The stream restoration elements of the project will be constructed primarily as Rosgen Priority 1 restoration with transitional areas constructed as Priority 2 to tie into external site constraints. Some shallow floodplain grading (since the existing floodplain has been graded for agricultural purposes) is required in areas of the Norkett Branch floodplain, but not to the degree of a traditional Priority 2 approach, coupled with raising the streambed similar to a traditional Priority 1 approach.

The stream restoration construction will result in meandering channels sized to convey the design discharge. Flows above the design discharge will frequently flood the adjacent floodplain. The reconstructed channel banks will be built with stable side slopes, planted with native materials, matted, and seeded for stability. The sinuous plan form of the channel will be built to mimic a natural Piedmont stream and allow the stream to maintain distinct pools and riffles and dissipate and collect energy via convergent and divergent flow dynamics.

Generally pools will occur in the outside of the meander bends and riffles will be located in the straight sections of channel between meanders. Riffle-pool sequences such as those that will be built in the new channels are common for gravel bed streams in the Piedmont and provide energy dissipation and aquatic habitat.

UT2A and UT3 will be constructed as Enhancement II with discrete areas of streambank grading, minimal in-stream habitat structures, and riparian buffer establishment. A step-pool stormwater conveyance water quality BMP will be constructed upstream of the jurisdictional breakpoint on UT3. A pocket wetland water quality BMP will be installed on a non-jurisdictional drainage in the northeastern Norkett Branch floodplain.

Scaled Schematic of Grading

The proposed grading is included in the preliminary design plans with this submittal.

In-Stream Structures and Other Construction Elements

In-stream structures will include constructed riffles, log sills, log vanes, log J-hooks, and boulder sills. The constructed riffles will be comprised of native gravel/cobble material harvested from the existing channel and incorporate brush, wood, large cobble, and angled logs. Quarried gravel and cobble will be substituted for the portion of total riffle material that cannot be met by harvesting native gravel/cobble material. The diverse range of constructed riffle types will provide grade control, heterogeneous habitat, and a varied flow regime. Log vanes will provide additional grade control and will deflect flow vectors away from banks while creating habitat diversity. Log and boulder sills will be used to allow for small grade drops across pools and provide extra grade control protection. At select outer meander bends, the channel banks will be constructed of brush toe to reduce erosion potential and encourage pool formation.

Areas where concentrated flow enters the floodplain from outside the conservation easement will benefit from the proposed vernal pool installation. Vernal pools will be approximately 12" to 18" deep and will intercept agricultural runoff for storage and treatment prior to the runoff reaching the project streams.

One existing culvert crossing, excluded from the conservation easement, will remain on Norkett Branch Reach 1 above the UT2 confluence. The existing collapsed bridge crossing on Norkett Branch Reach 2 will be replaced with a culvert crossing with invert buried 12" for stream bottom habitat. Two existing ford crossings, excluded from the conservation easement, will remain on UT2. Fencing will be installed along the conservation easement boundary in locations where the adjacent land use will remain active cattle pasture. Crossings located in cattle pasture will have cattle gates so that cattle will be herded through to move from one pasture to another rather than having unrestricted access to crossing areas at all times.

9.5.2 Natural Plant Community Restoration

As a final stage of construction, riparian stream buffers and wetlands will be planted and restored with native trees and herbaceous plants representative of the natural plant community that exists within the project watershed with an emphasis on early successional commercially available species. Selection criterion for plant communities are described in section 9.2.

Individual tree and shrub species will be planted throughout the project easement including stream banks, benches, tops of banks, and floodplains zones. These species will be planted as bare root and live stakes and will provide additional stabilization to the outsides of constructed meander bends and side slopes. Live stakes will be planted on channel banks in tangent sections and outer meander bends. Point bars will not be planted with live stakes. Low growing permanent herbaceous seed will be placed on stream banks, floodplains, and additional disturbed areas within the project easement. Areas disturbed outside the easement will be seeded with pasture grasses. Proposed plant lists are included in the preliminary plan set.

10.0 Maintenance Plan

The site shall be monitored on a regular basis and a physical inspection of the site shall be conducted a minimum of once per year throughout the post-construction monitoring period until performance standards are met. These site inspections may identify site components and features that require routine maintenance. Routine maintenance should be expected most often in the first two years following site construction and may include the following:

Table 24. Maintenance Plan
Norkett Branch Mitigation Site

Component/Feature	Maintenance through project close-out
Stream	Routine channel maintenance and repair activities may include chinking of in-stream structures to prevent piping, securing of loose coir matting, and supplemental installations of live stakes and other target vegetation along the channel. Areas where storm water and floodplain flows intercept the channel may also require maintenance to prevent bank failures and head-cutting.
Water Quality BMPs	Routine BMP maintenance may include removal of accumulated sediment from the bottom of the BMP. Sediment and vegetation shall be removed from the stone weir and outlet channel to ensure a positive drainage pattern. Stone and boulders may have to be adjusted or re-installed to prevent scour.
Vegetation	Vegetation shall be maintained to ensure the health and vigor of the targeted community. Routine vegetation maintenance and repair activities

Component/Feature	Maintenance through project close-out
	may include supplemental planting, pruning, mulching, and fertilizing. Exotic invasive plant species shall be controlled by mechanical and/or chemical methods. Any vegetation control requiring herbicide application will be performed in accordance with NC Department of Agriculture (NCDA) rules and regulations.
Site boundary	Site boundaries shall be identified in the field to ensure clear distinction between the mitigation site and adjacent properties. Boundaries may be identified by fence, marker, bollard, post, tree-blazing, or other means as allowed by site conditions and/or conservation easement. Boundary markers disturbed, damaged, or destroyed will be repaired and/or replaced on an as-needed basis.
Ford and Culvert Crossings	Ford crossings within the site may be maintained only as allowed by Conservation Easement or existing easement, deed restrictions, rights of way, or corridor agreements.

11.0 Performance Standards

The stream restoration performance criteria for the project site will follow approved performance criteria presented in the EEP Mitigation Plan Template (version 2.1, 09/01/2011), the EEP Monitoring Requirements and Performance Standards for Stream and/or Wetland Mitigation (11/7/2011), and the Stream Mitigation Guidelines issued in April 2003 by the USACE and NCDWQ. Annual monitoring and bi-annual site visits will be conducted to assess the condition of the finished project. The stream restoration and enhancement sections of the project will be assigned specific performance criteria components for stream morphology, hydrology, and vegetation. Performance criteria will be evaluated throughout the seven year post-construction monitoring. If all performance criteria have been successfully met and two bankfull events have occurred during separate years, Wildlands may propose to terminate stream and/or vegetation monitoring after Year 5, in accordance with the Early Closure Provision in the EEP Monitoring Requirements and Performance Standards for Stream and/or Wetland Mitigation (November 7, 2011).

An outline of the performance criteria components follows.

11.1 Streams

11.1.1 Dimension

Riffle cross-sections on the restoration reaches should be stable and should show little change in bankfull area, maximum depth ratio, and width-to-depth ratio. Per EEP guidance, bank height ratios shall not exceed 1.2 and entrenchment ratios shall be at least 2.2 for restored channels to be considered stable. All riffle cross-sections should fall within the parameters defined for channels of the appropriate Rosgen stream type. If any changes do occur, these changes will be evaluated to assess whether the stream channel is showing signs of instability. Indicators of instability include a vertically incising thalweg or eroding channel banks. Changes in the channel that indicate a movement toward stability or enhanced habitat include a

decrease in the width-to-depth ratio in meandering channels or an increase in pool depth. Remedial action would not be taken if channel changes indicate a movement toward stability.

In order to monitor the channel dimension, one permanent cross-section will be installed per 20 bankfull channel widths along stream restoration/enhancement reaches, with riffle and pool sections in proportion to EEP guidance. Each cross-section will be permanently marked with pins to establish its location. Cross-section surveys will include points measured at all breaks in slope, including top of bank, bankfull, edge of water, and thalweg. If moderate bank erosion is observed within permanent cross-sections during the monitoring period, an array of bank pins will be installed in the permanent cross-section where erosion is occurring for reaches with a bankfull width of greater than three feet. Bank pins will be installed on the outside bend of the cross-section in at least three locations (one in upper third of the pool, one at the permanent cross-section, and one in the lower third of the pool). Bank pins will be monitored by measuring exposed rebar and maintaining pins flush to bank to capture bank erosion progression. Annual cross-section and bank pin survey will be conducted in monitoring years one, two, three, five, and seven.

11.1.2 Pattern and Profile

The as-built survey will include a longitudinal profile for the baseline monitoring report. Longitudinal profile surveys will not be conducted during the seven year monitoring period unless other indicators during the annual monitoring indicate a trend toward vertical and lateral instability. If a longitudinal profile is deemed necessary, monitoring will follow standards as described in the EEP Monitoring Requirements and Performance Standards for Stream and/or Wetland Mitigation (11/7/2011) and the 2003 USACE and NCDWQ Stream Mitigation Guidance for the necessary reaches.

11.1.3 Substrate

Substrate materials in the restoration reaches should indicate a progression towards or the maintenance of coarser materials in the riffle features and smaller particles in the pool features.

A reach-wide pebble count will be performed in each restoration reach each year for classification purposes. A pebble count will be performed at each surveyed riffle to characterize the pavement.

11.1.4 Photo Documentation

Photographs will be taken once a year to visually document stability for seven years following construction. Permanent markers will be established and located with GPS equipment so that the same locations and view directions on the site are photographed each year. Photos will be used to monitor restoration and enhancement stream reaches as well as vegetation plots. Photos will also document the conversion of the filled old channel on Norkett Branch Reach 1 into wetland conditions.

Longitudinal reference photos will be established at the tail of riffles approximately every 200 LF along the channel by taking a photo looking upstream and downstream. Cross-sectional photos will be taken of each permanent cross-section looking upstream and downstream. Reference photos will also be taken for each of the vegetation plots. Representative digital photos of each permanent photo point, cross-section and vegetation plot will be taken on the

same day of the stream and vegetation assessments are conducted. The photographer will make every effort to consistently maintain the same area in each photo over time.

Photographs should illustrate the site's vegetation and morphological stability on an annual basis. Cross-section photos should demonstrate no excessive erosion or degradation of the banks. Longitudinal photos should indicate the absence of persistent bars within the channel or vertical incision. Grade control structures should remain stable. Deposition of sediment on the bank side of vane arms is preferable. Maintenance of scour pools on the channel side of vane arms is expected.

11.1.5 Bankfull Events

Two bankfull flow events must be documented on the restoration and enhancement reaches within the seven-year monitoring period. The two bankfull events must occur in separate years. Stream monitoring will continue until success criteria in the form of two bankfull events in separate years have been documented.

Bankfull events will be documented using a crest gage, photographs, and visual assessments such as debris lines. Four crest gages will be installed; one on Norkett Branch Reach 1, one on Norkett Branch Reach 2, one on UT1 and one on UT2. The crest gages will be installed within a riffle cross-section of the restored channels in surveyed riffle cross-sections. The gages will be checked at each site visit to determine if a bankfull event has occurred. Photographs will be used to document the occurrence of debris lines and sediment deposition.

11.2 Visual Assessments

Visual assessments will be performed along all stream and water quality BMP areas on a bi-annual basis during the seven year monitoring period. Problem areas will be noted such as channel instability (i.e. lateral and/or vertical instability, in-stream structure failure/instability and/or piping, headcuts), vegetated buffer health (i.e. low stem density, vegetation mortality, invasive species or encroachment), beaver activity, or livestock access. Areas of concern will be mapped and photographed accompanied by a written description in the annual report. Problem areas with be re-evaluated during each subsequent visual assessment. Should remedial actions be required, recommendations will be provided in the annual monitoring report.

11.3 Vegetation

The final vegetative success criteria will be the survival of 210 planted stems per acre in the riparian corridor along restored and enhanced reaches at the end of the required monitoring period (year seven). The interim measure of vegetative success for the site will be the survival of at least 320 planted stems per acre at the end of the third monitoring year and at least 260 stems per acre at the end of the fifth year of monitoring. Planted vegetation must average 10 feet in height in each plot at the end of the seventh year of monitoring. If this performance standard is met by year five and stem density is trending towards success (i.e., no less than 260 five year old stems/acre), monitoring of vegetation on the site may be terminated provided written approval is provided by the USACE in consultation with the NC Interagency Review Team. The extent of invasive species coverage will also be monitored and controlled as necessary throughout the required monitoring period (year five or seven).

12.0 Monitoring Plan

Annual monitoring data will be reported using the EEP Monitoring Report template (version 1.4, 11/7/11). The monitoring report shall provide a project data chronology that will facilitate an understanding of project status and trends, population of EEP databases for analysis, research purposes, and assist in decision making regarding close-out. The monitoring period will extend seven years beyond completion of construction or until performance criteria have been met. Project monitoring requirements are listed in more detail in Tables 18A and 18B. All survey will be tied to grid.

12.1 Site Specific Monitoring

Using the EEP Baseline Monitoring Plan Template (version 2.0, 10/14/10), a baseline monitoring document and as-built record drawings of the project will be developed within 60 days of the planting completion and monitoring installation on the restored site. Monitoring reports will be prepared in the fall of each year of monitoring and submitted to EEP. These reports will be based on the EEP Monitoring Report Template (version 1.4, 11/7/11). The monitoring period will extend seven years beyond completion of construction or until performance criteria have been met per the criteria stated in the EEP Monitoring Requirements and Performance Standards for Stream and/or Wetland Mitigation (11/7/2011). Project monitoring requirements are listed in more detail in Tables 25A and 25B.

Table 25A. Monitoring Requirements- Norkett Branch, UT1, UT3, and WQ BMPs
Norkett Branch Stream Mitigation Site

Parameter	Monitoring Feature	Quantity/ Length by Reach						Frequency	Notes
		Norkett Branch Reach 1	Norkett Branch Reach 2	UT1	UT3	WQ BMP SPSC	WQ BMP Pocket Wetland		
Dimension	Riffle Cross Sections	3	2	1	n/a	n/a	n/a	Annual	1
	Pool Cross Section	2	1	1	n/a	n/a	n/a	Annual	
Pattern	Pattern	n/a	n/a	n/a	n/a	n/a	n/a	Annual	2
Profile	Longitudinal Profile	n/a	n/a	n/a	n/a	n/a	n/a	Annual	
Substrate	Reach wide (RW), Riffle (RF) 100 pebble count	3	2	1	n/a	n/a	n/a	Annual	
Hydrology	Crest Gage	1		1	n/a	n/a	n/a	Annual	3
Vegetation	CVS Level 2	8	7	5	1	n/a	n/a	Annual	4
Exotic and nuisance vegetation								Annual	5
Project Boundary								Annual	6
Reference Photos	Photographs	10 [8]	8	4	2	2	2	Annual	7

1. Cross-sections will be permanently marked with rebar to establish location. Surveys will include points measured at all breaks in slope, including top of bank, bankfull, edge of water, and thalweg.
2. Pattern and profile will be assessed visually during annual site visits. Longitudinal profile will be completed with as-built survey for baseline monitoring.
3. Device will be inspected quarterly or semi-annually, evidence of bankfull will be documented with a photo.
4. Vegetation monitoring will follow CVS protocols.
5. Locations of exotic and nuisance vegetation will be mapped.
6. Locations of fence damage, vegetation damage, boundary encroachments, etc. will be mapped.
7. Permanent markers will be established so that the same locations and view directions on the site are monitored.
8. Photos of old channel will be used to document conversion to wetland resource.

Table 25B. Monitoring Requirements- UT2 and UT2A
Norkett Branch Stream Mitigation Site

Parameter	Monitoring Feature	UT2 Reach 1	UT2 Reach 2	UT2 Reach 3A	UT2 Reach 3B	UT2A	Frequency	Notes
Dimension	Riffle Cross Sections	1	2	1	1	n/a	Annual	1
	Pool Cross Section	1	2	1	1	n/a	Annual	
Pattern	Pattern	n/a	n/a	n/a	n/a	n/a	Annual	2
Profile	Longitudinal Profile	n/a	n/a	n/a	n/a	n/a	Annual	
Substrate	Reach wide (RW), Riffle (RF) 100 pebble count	1	2	1	1	n/a	Annual	
Hydrology	Crest Gage	1				n/a	Annual	3
Vegetation	CVS Level 2	4	5	7		5	Annual	4
Exotic and nuisance vegetation							Annual	5
Project Boundary							Annual	6
Reference Photos	Photographs	4	6	5	2	2	Annual	7

1. Cross-sections will be permanently marked with rebar to establish location. Surveys will include points measured at all breaks in slope, including top of bank, bankfull, edge of water, and thalweg.
2. Pattern and profile will be assessed visually during annual site visits. Longitudinal profile will be completed with as-built survey for baseline monitoring.
3. Device will be inspected quarterly or semi-annually, evidence of bankfull will be documented with a photo.
4. Vegetation monitoring will follow CVS protocols.
5. Locations of exotic and nuisance vegetation will be mapped.
6. Locations of fence damage, vegetation damage, boundary encroachments, etc. will be mapped.
7. Permanent markers will be established so that the same locations and view directions on the site are monitored.

12.2 Additional Monitoring Details- Vegetation

Vegetation monitoring plots will be installed and evaluated within the restoration and enhancement areas to measure the survival of the planted trees. The number of monitoring quadrants required is based on the EEP monitoring guidance documents (version 1.4, 11/7/11). The size of individual quadrants will be 100 square meters for woody tree species and shrubs. Vegetation assessments will be conducted following the Carolina Vegetation Survey (CVS) Level 2 Protocol for Recording Vegetation (2006).

The initial baseline survey will be conducted within 21 days from completion of site planting and used for subsequent monitoring year comparisons. The first annual vegetation monitoring activities will commence at the end of the first growing season, during the month of September. The restoration and enhancement sites will then be evaluated each subsequent year between June 1 and September 31. Species composition, density, and survival rates will be evaluated on an annual basis by plot and for the entire site. Individual plot data will be provided and will include height, density, vigor, damage (if any), and survival. Planted woody stems will be marked annually as needed and given a coordinate, based off of a known origin, so they can be found in succeeding monitoring years. Mortality will be determined from the difference between the previous year's living planted stems and the current year's living planted stems.

12.3 Additional Monitoring Details- Water Quality BMPs

Water quality grab samples will be collected during the monitoring period to assess the functionality of the step pool stormwater conveyance BMP and the pocket wetland BMP and to compare to published predicted pollutant removal rates. This sampling will not be part of the success criteria for the project.

13.0 Long-Term Management Plan

Upon approval for close-out by the Interagency Review Team (IRT) the site will be transferred to the NCDENR Division of Natural Resource Planning and Conservation's Stewardship Program. This party shall be responsible for periodic inspection of the site to ensure that restrictions required in the conservation easement or the deed restriction document(s) are upheld. Endowment funds required to uphold easement and deed restrictions shall be negotiated prior to site transfer to the responsible party.

The NCDENR Division of Natural Resource Planning and Conservation's Stewardship Program currently houses EEP stewardship endowments within the non-reverting, interest-bearing Conservation Lands Stewardship Endowment Account. The use of funds from the Endowment Account is governed by North Carolina General Statue GS 113A-232(d)(3). Interest gained by the endowment fund may be used only for the purpose of stewardship, monitoring, stewardship administration, and land transaction costs, if applicable. The NCDENR Stewardship Program intends to manage the account as a non-wasting endowment. Only interest generated from the endowment funds will be used to steward the compensatory mitigation sites. Interest funds not used for those purposes will be re-invested in the Endowment Account to offset losses due to inflation.

14.0 Adaptive Management Plan

Upon completion of site construction EEP will implement the post-construction monitoring protocols previously defined in this document. Project maintenance will be performed as described previously in this document. If, during the course of annual monitoring it is determined the site's ability to achieve site performance standards are jeopardized, EEP will notify the USACE of the need to develop a Plan of Corrective Action. The Plan of Corrective Action may be prepared using in-house technical staff or may require engineering and consulting services. Once the Corrective Action Plan is prepared and finalized EEP will:

- Notify the USACE as required by the Nationwide 27 permit general conditions.
- Revise performance standards, maintenance requirements, and monitoring requirements as necessary and/or required by the USACE.

- Obtain other permits as necessary.
- Implement the Corrective Action Plan.
- Provide the USACE a Record Drawing of Corrective Actions. This document shall depict the extent and nature of the work performed.

15.0 Financial Assurances

Pursuant to Section IV H and Appendix III of the Ecosystem Enhancement Program's In-Lieu Fee Instrument dated July 28, 2010, the North Carolina Department of Environment and Natural Resources has provided the US Army Corps of Engineers Wilmington District with a formal commitment to fund projects to satisfy mitigation requirements assumed by EEP. This commitment provides financial assurance for all mitigation projects implemented by the program.

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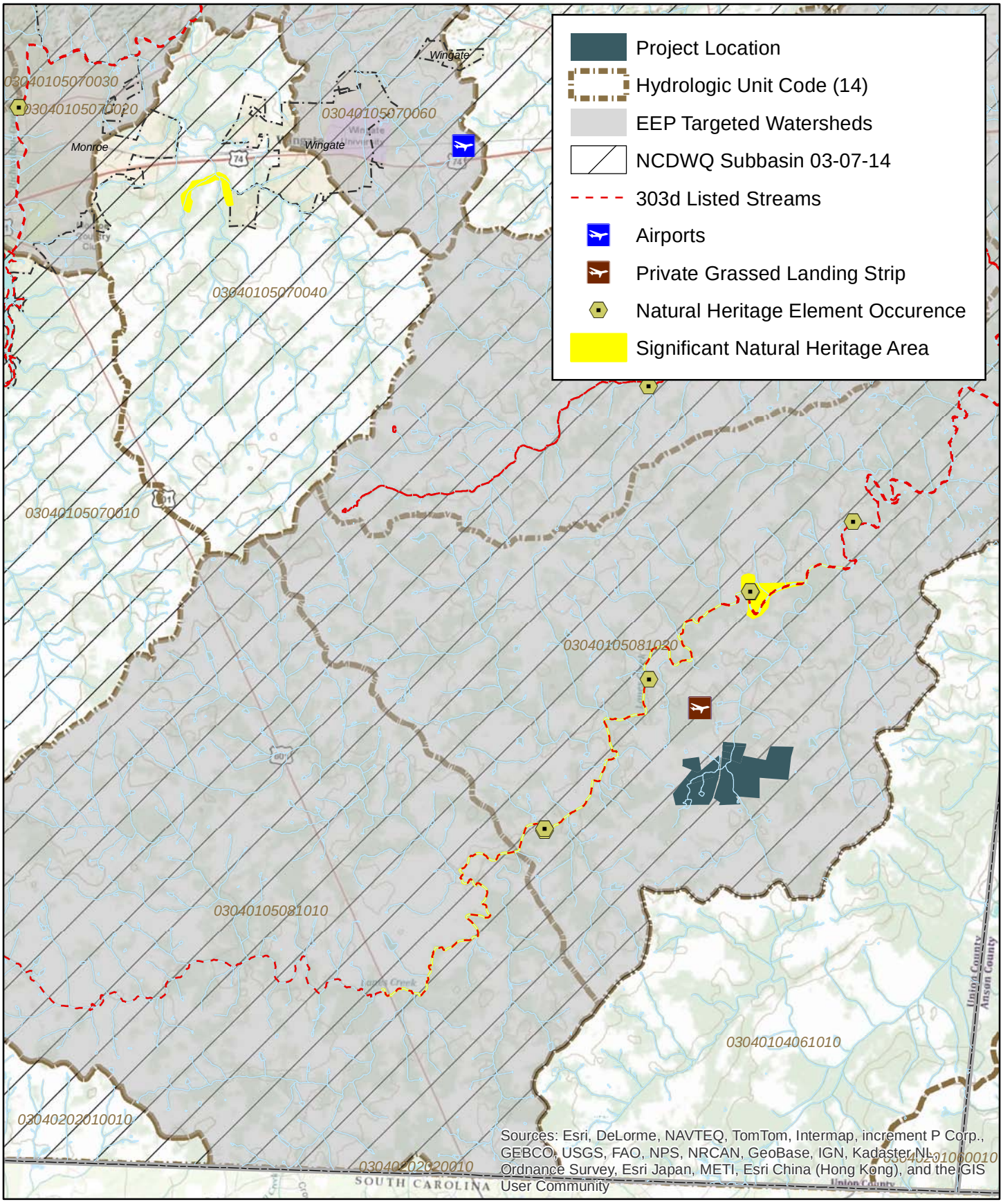

WILDLANDS ENGINEERING

0 0.75 1.5 Miles

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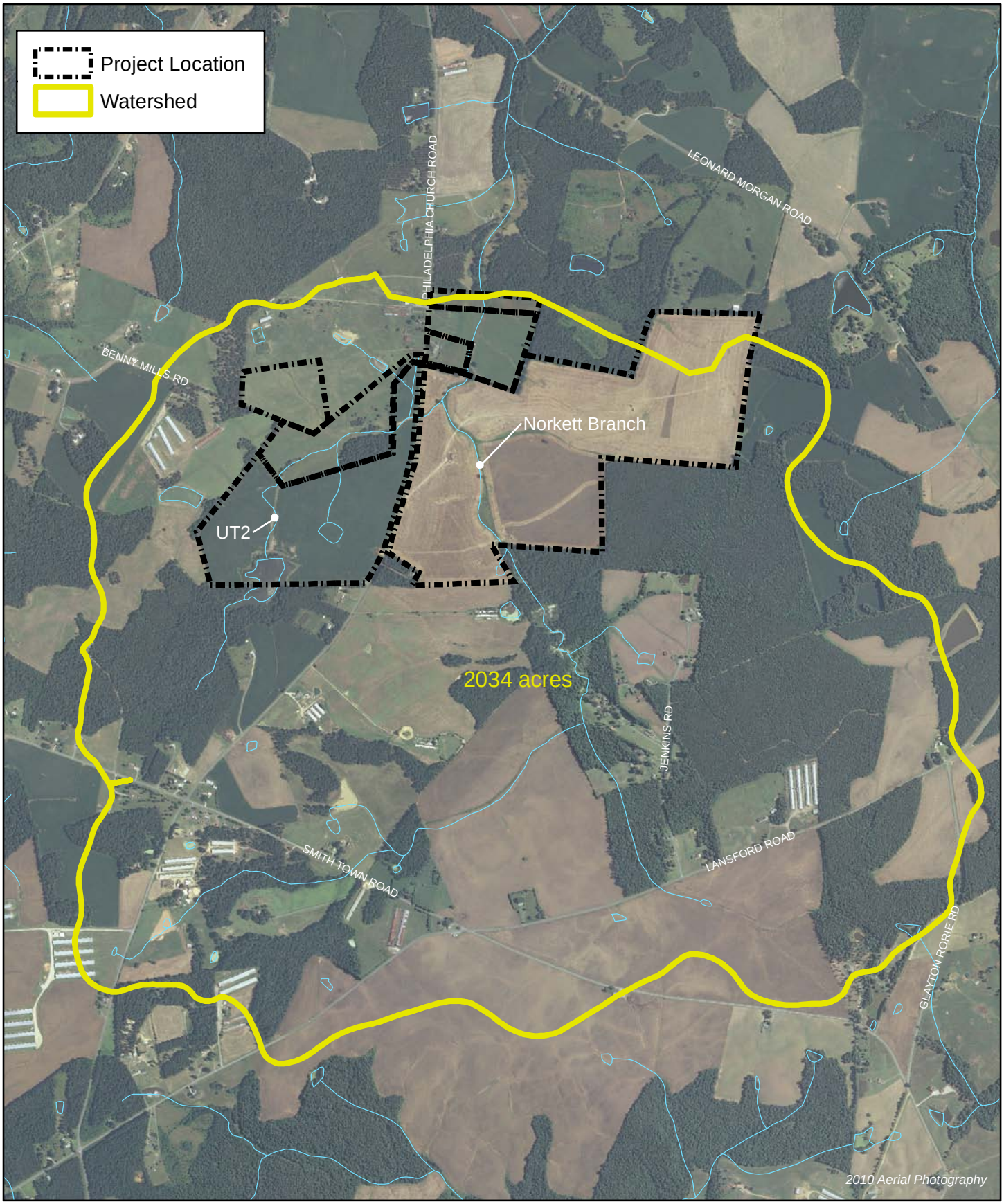
Figure 1 Vicinity Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC



WILDLANDS ENGINEERING

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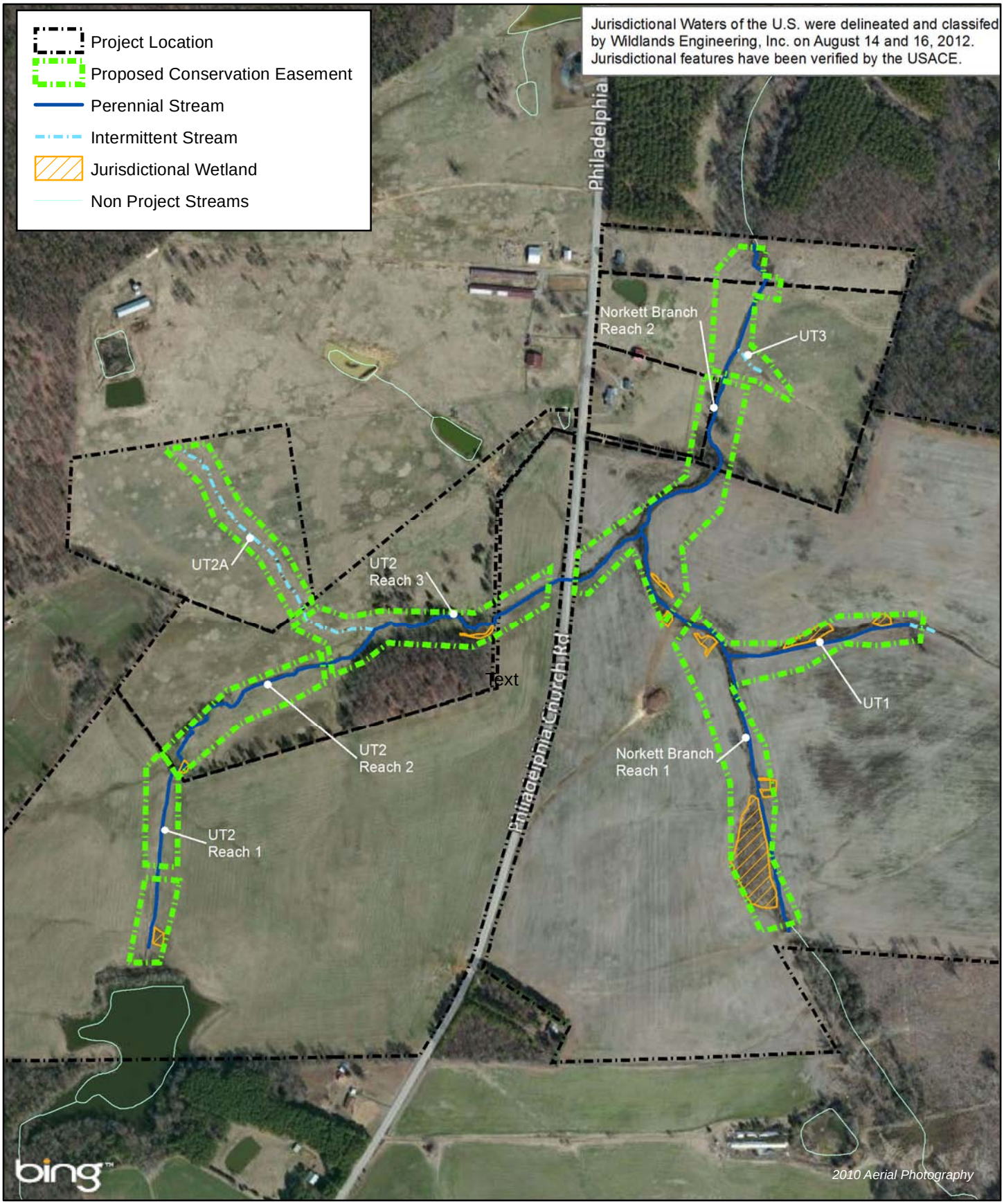
Figure 2 Watershed Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC



WILDLANDS ENGINEERING

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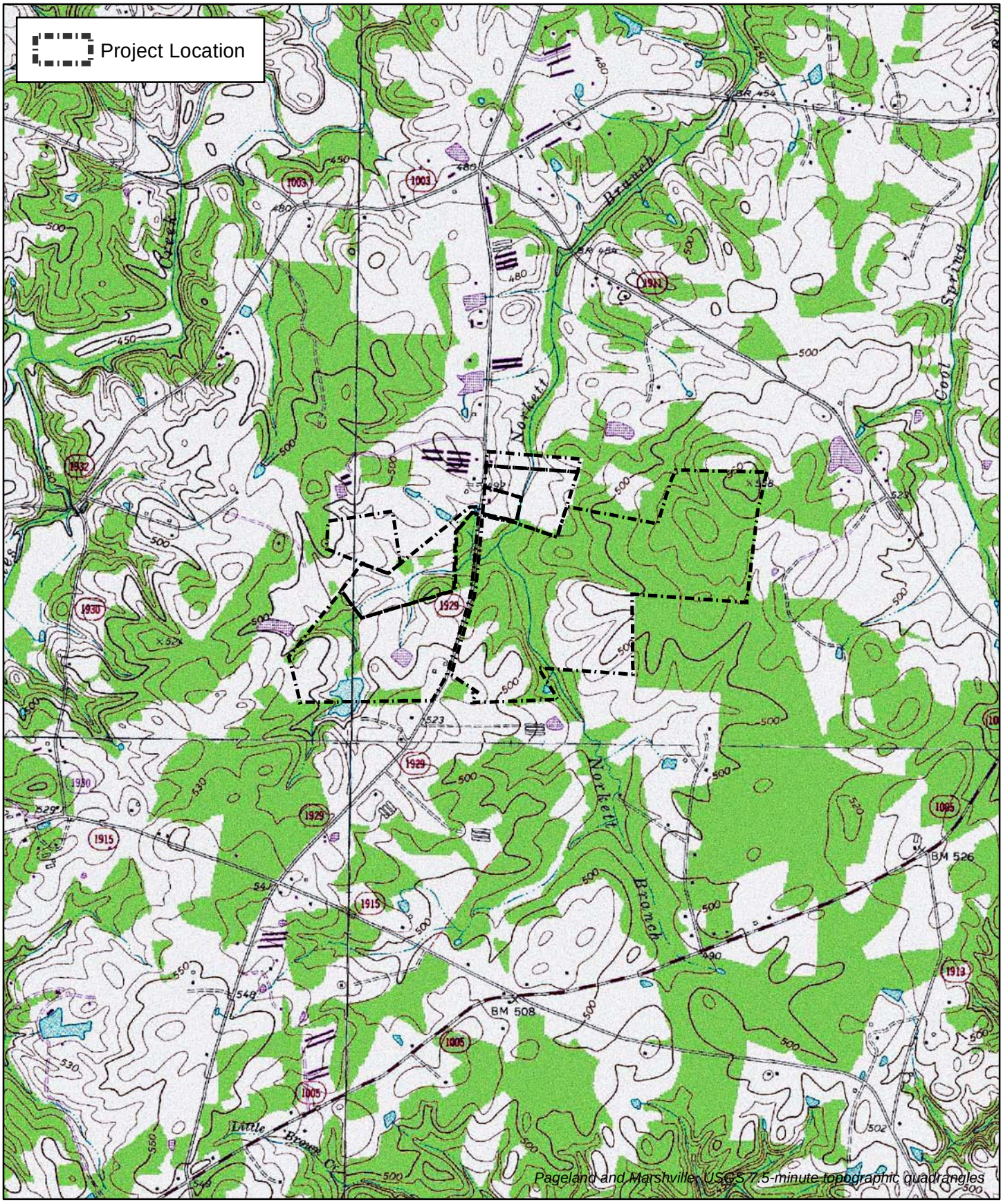
Figure 3 Site Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC



WILDLANDS ENGINEERING

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Figure 4 USGS Topographic Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC

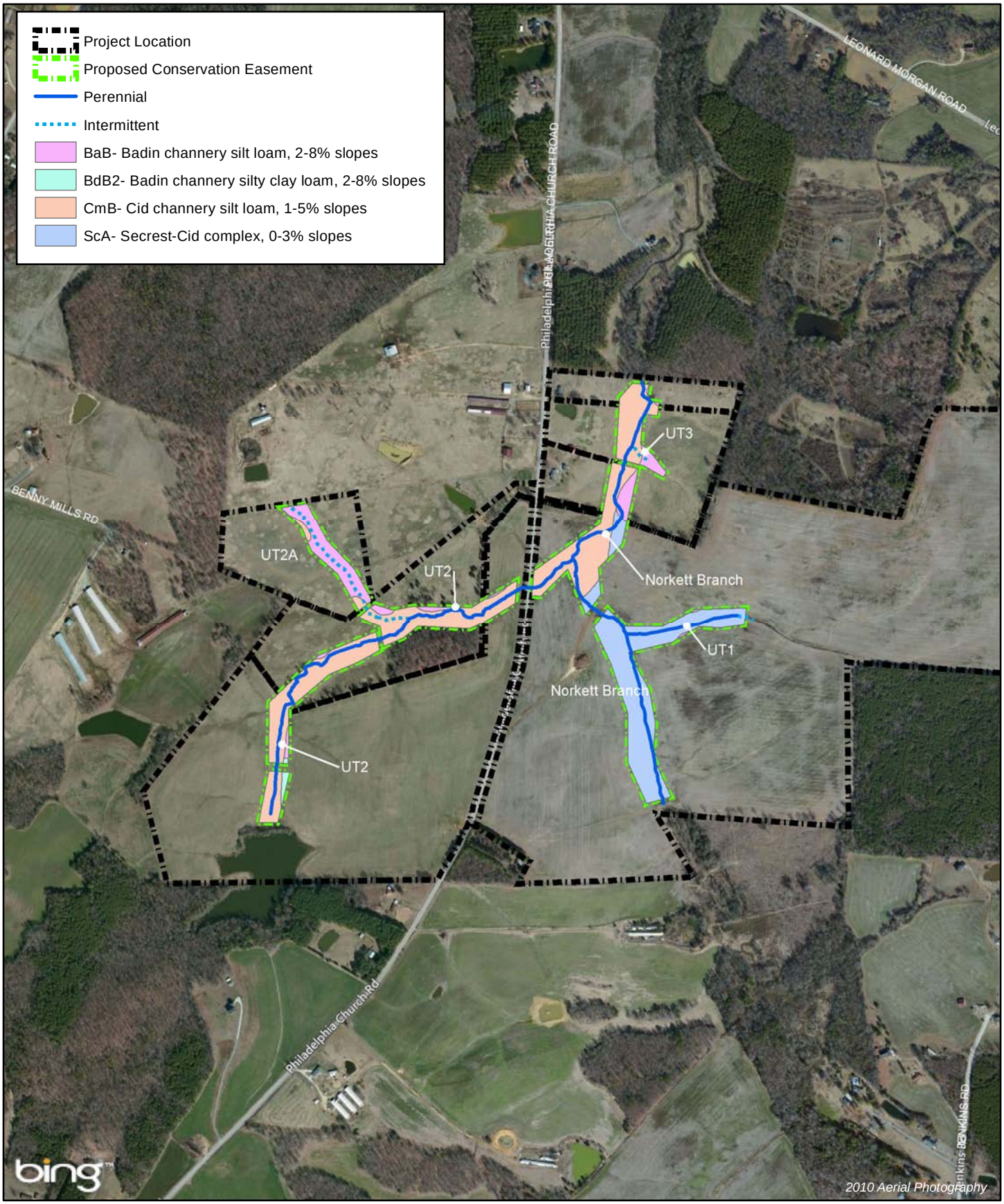

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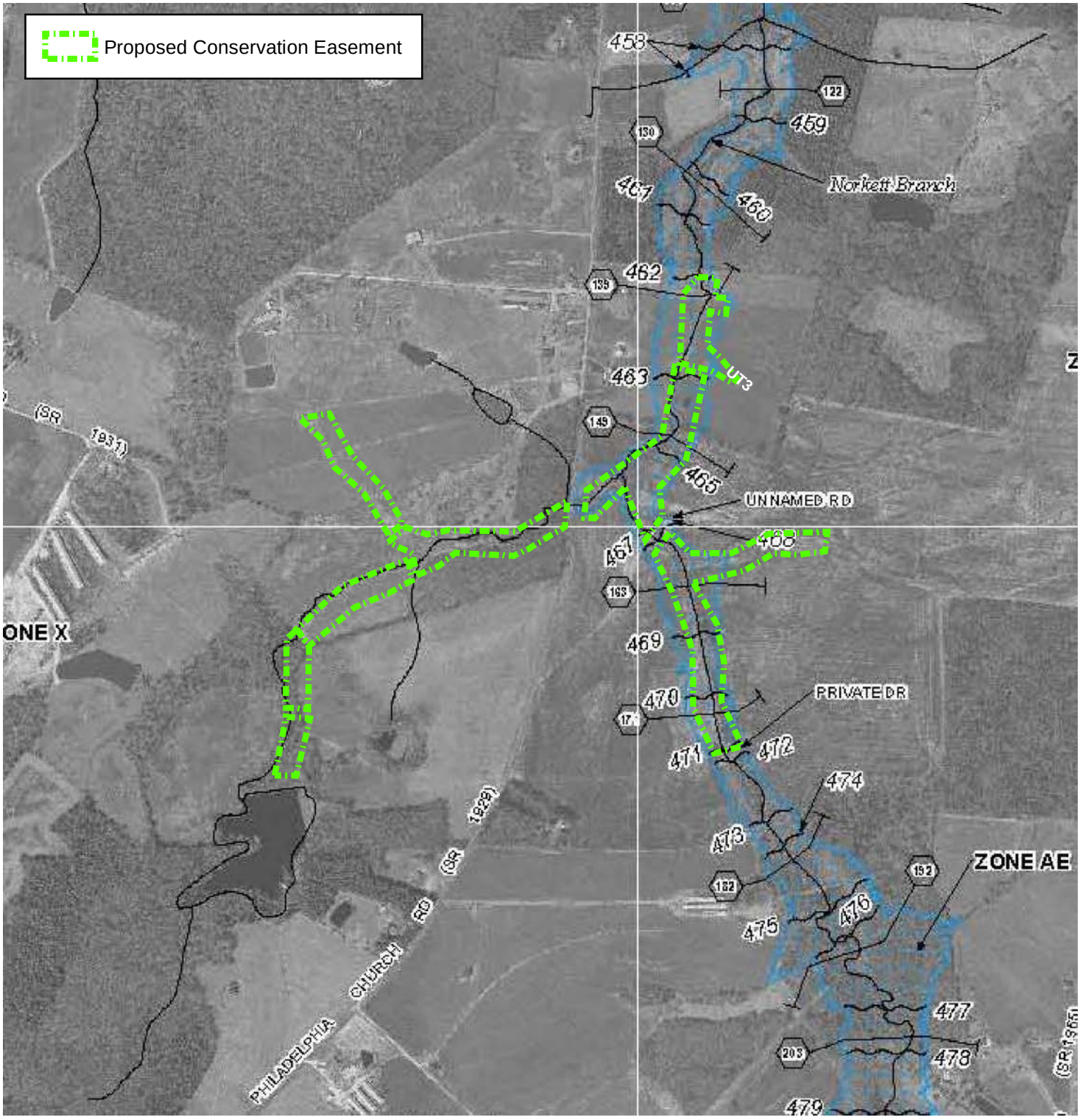
Figure 5 Soils Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC



FIRM Panel 5480, dated October 16, 2008.

WILDLANDS ENGINEERING

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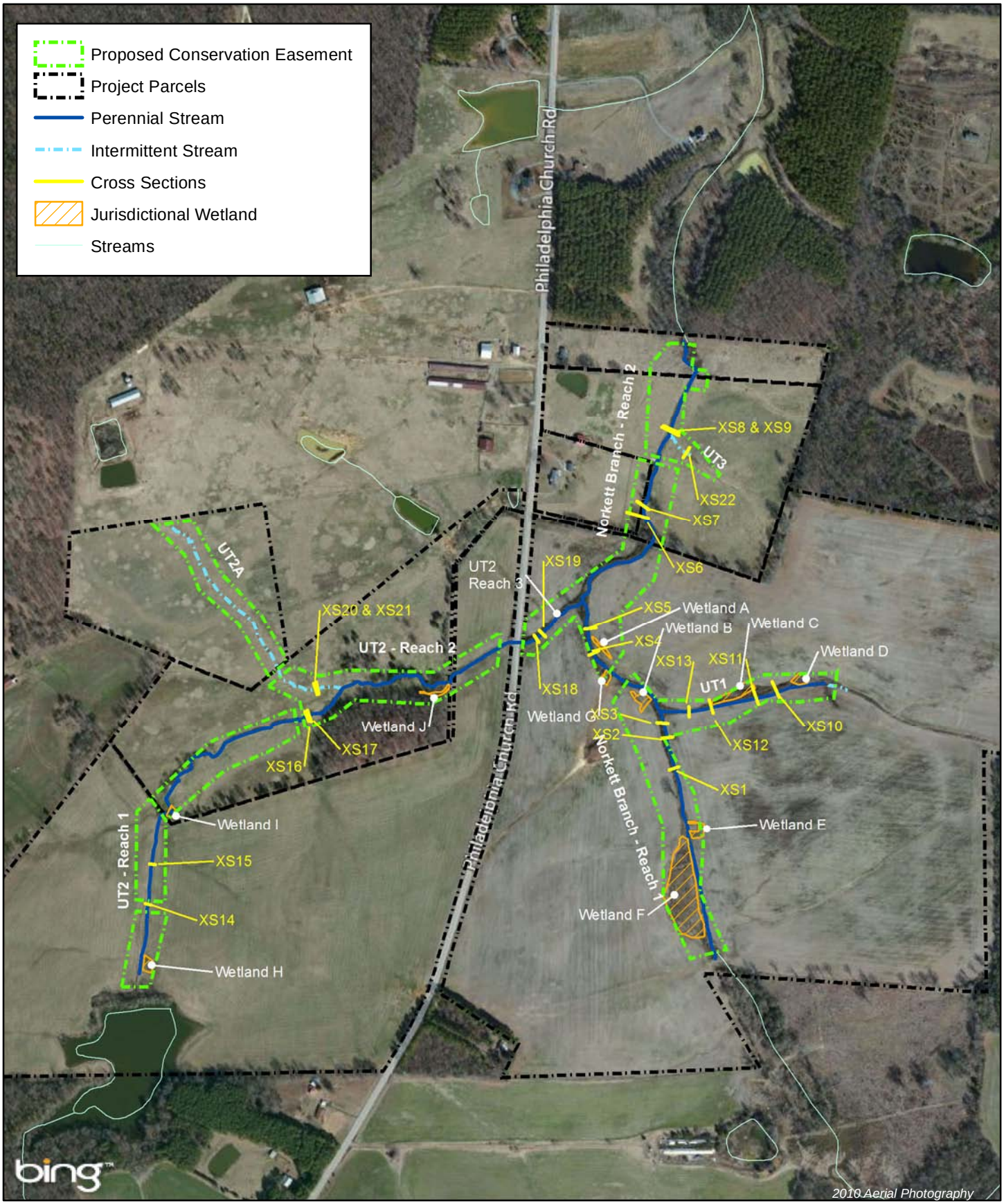
Figure 6 FEMA Flood Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC



WILDLANDS ENGINEERING

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Figure 7 Hydrologic Features Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC

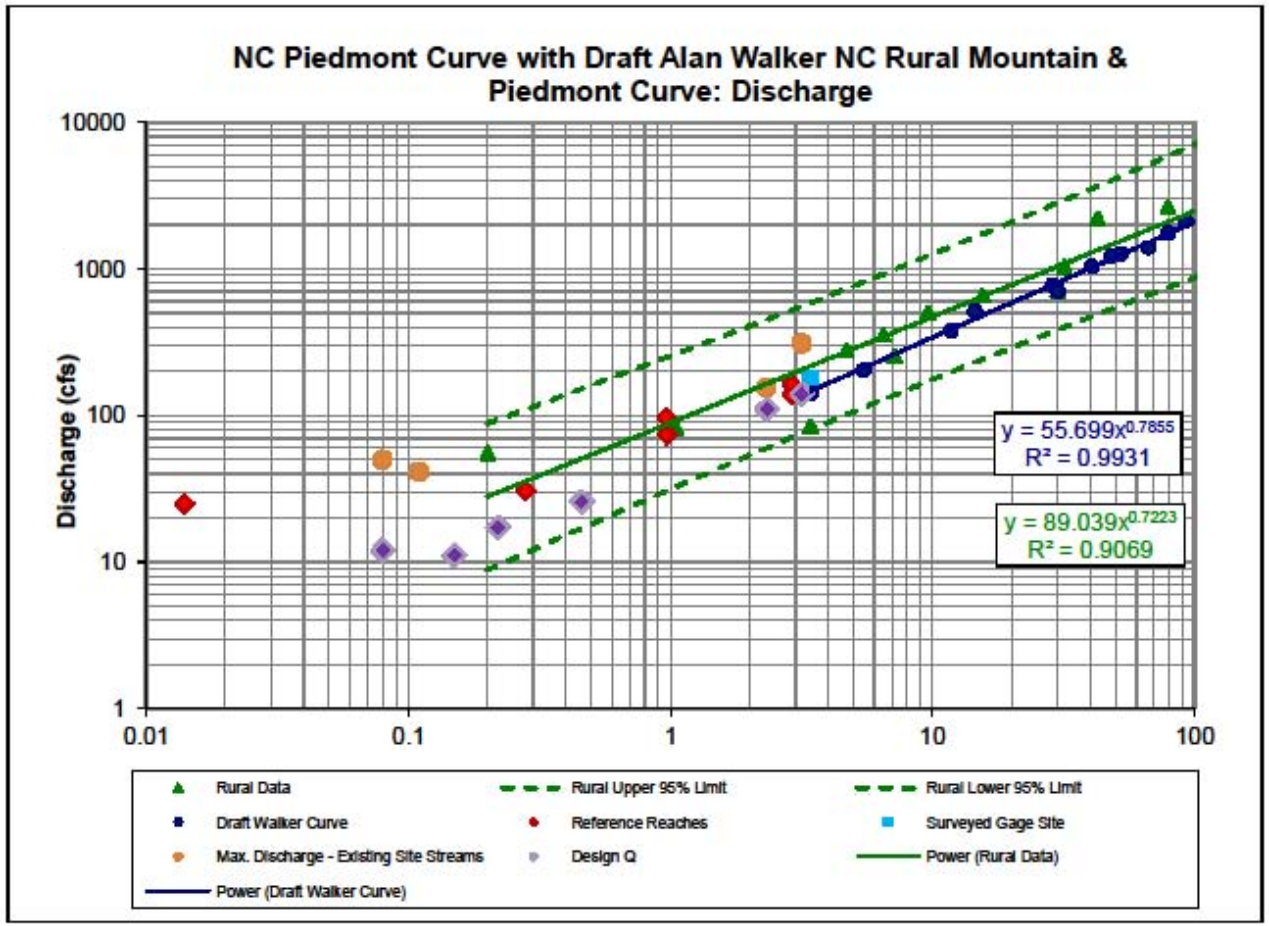
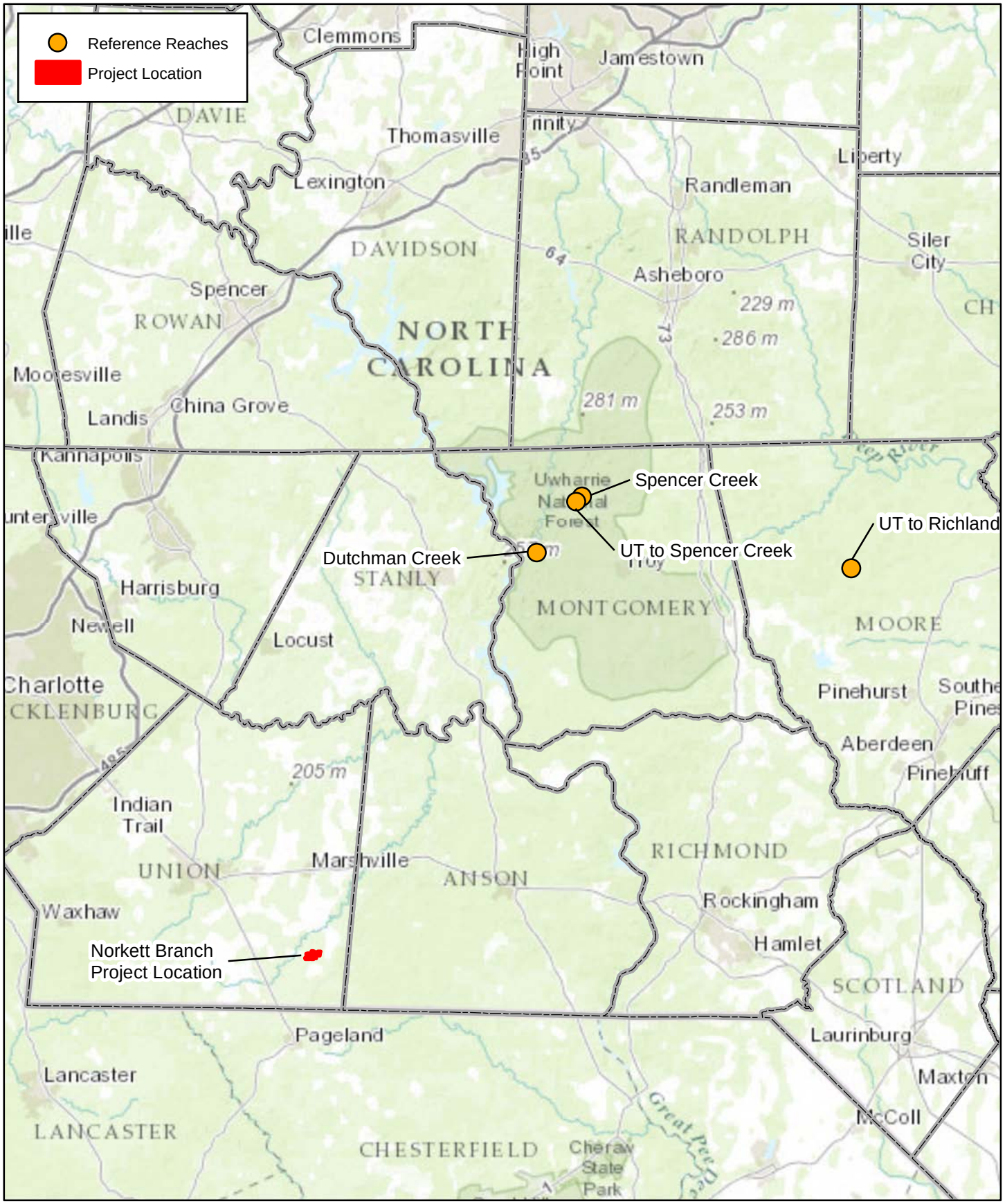


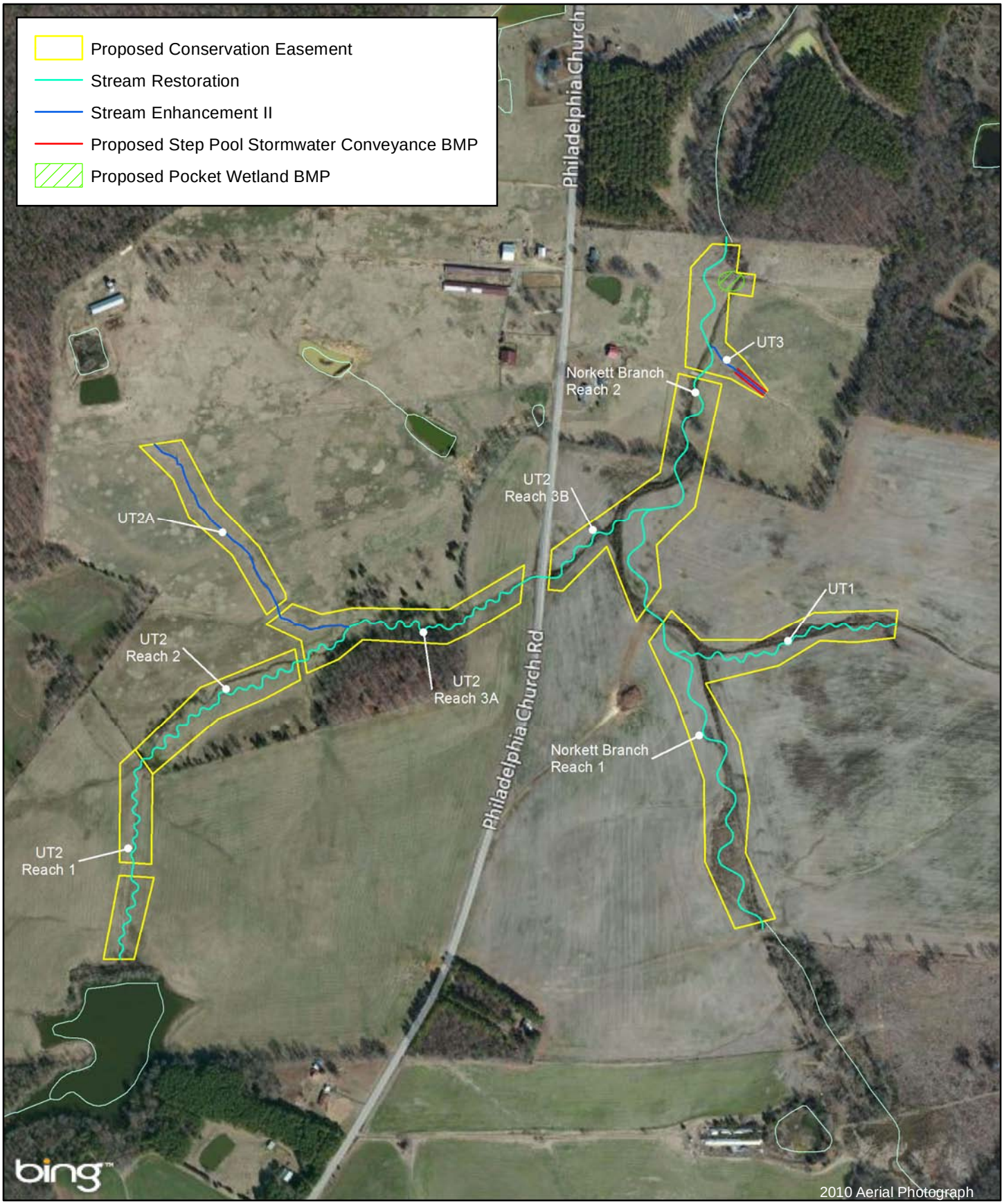
Figure 8 NC Piedmont Regional Curves
with Project Data Overlay
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)

Union County, NC



WILDLANDS ENGINEERING

Figure 9 Reference Reach Vicinity Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC



WILDLANDS ENGINEERING

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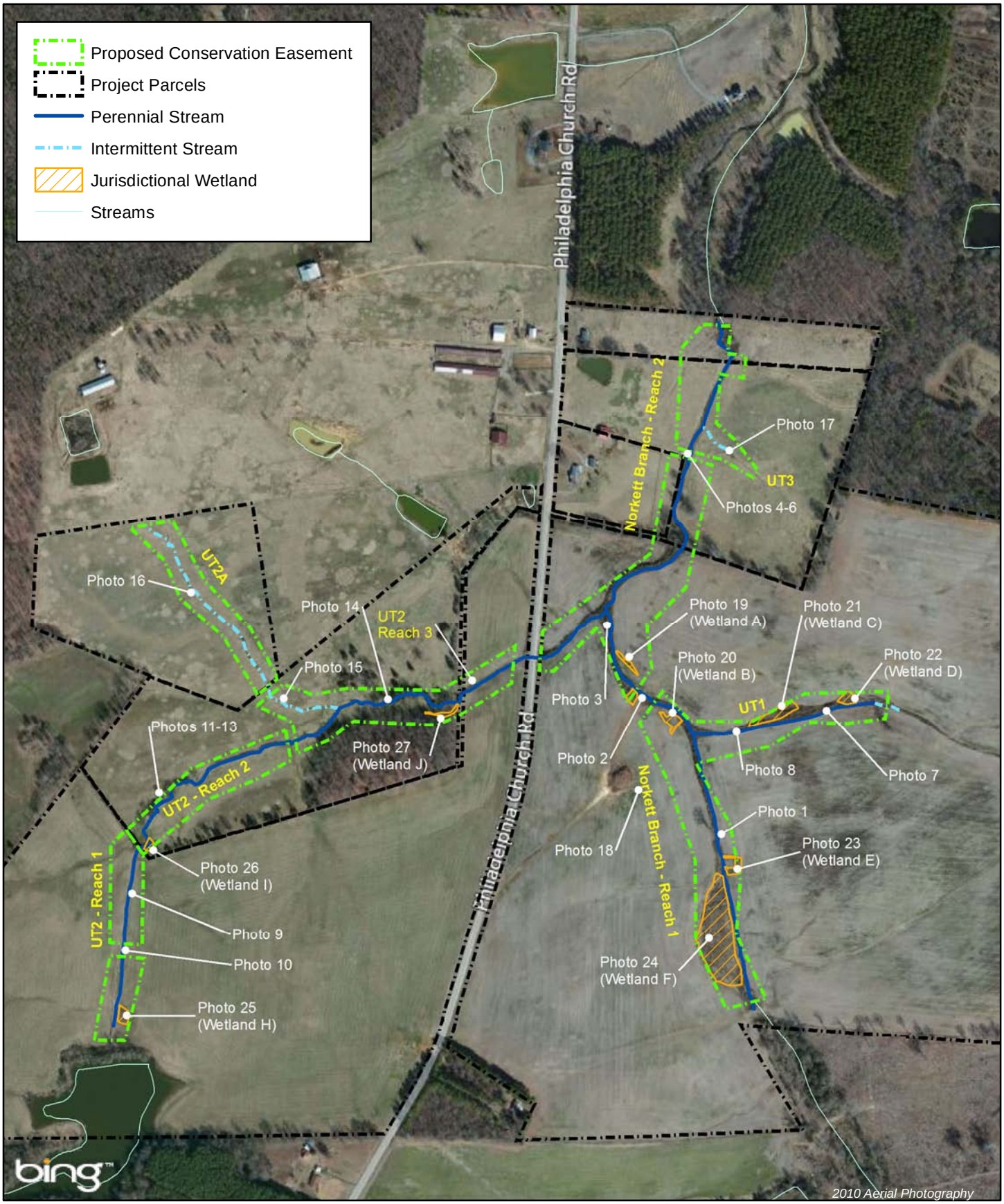
Figure 10 Concept Design
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC

APPENDIX 1. Project Site Photographs



WILDLANDS ENGINEERING

0 300 600 Feet

N

Figure 1-1 Site Photographs Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC

Photo 1-View of upstream reach of Norkett Branch, facing downstream.

Photo 3-Looking downstream from culvert crossing in row crop fields on upper portion of Norkett Branch.

Photo 2-View of upstream reach of Norkett Branch, facing downstream.

Photo 4-View of backwater area immediately upstream of collapsed bridge crossing on lower reach of Norkett Branch.

Photo 5-Looking towards left floodplain at collapsed bridge crossing.

Photo 6-Looking downstream of collapsed bridge crossing.

Photo 7- Looking downstream along UT1. Vegetation is maintained up to channel along portions of reach.

Photo 8- Looking upstream along UT1.

Photo 9- View of upstream, ditched and maintained portion of UT2.

Photo 10-Looking downstream at field crossing along UT1.

Photo 11-Looking upstream along UT2 at cattle impacts.

Photo 12-Cattle accessing UT2.

Photo 13-Vertical raw banks along UT2.

Photo 14-View of overwide area due to cattle impacts on UT2, facing downstream.

Photo 15-View of lower portion of UT2A.

Photo 16-View of upper portion of UT2A.

Photo 17-View of UT3 facing downstream to Norkett Branch.

Photo 18-Looking eastward across row crop fields along Norkett Branch towards UT1.

Photo 19-View of Wetland A facing north to Norkett Branch.

Photo 20-View of Wetland B adjacent to Norkett Branch.

Photo 21-View of Wetland C in the floodplain of UT1.

Photo 22-View of Wetland D at the upstream portion of UT1.

Photo 23-View of Wetland E in the floodplain of Norkett Branch.

Photo 24-View of Wetland F in the floodplain of Norkett Branch; upstream reach.

Photo 25-View of Wetland H at the upstream portion of UT2.

Photo 26-View of Wetland I in the upper cattle field of UT2.

Photo 27-View of Wetland J in the eastern portion of the cattle field.

APPENDIX 2. Project Site USACE Routine Wetland Determination Data Forms and Jurisdictional Determination

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland A - DP1

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.882853 Long: W 80.367174 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: R2EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil ✔, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of Norkett Branch. This feature is located within an active row-crop field and experiences significant seasonal disturbances to vegetation and the top layer of soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): 3-4"

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): <12"

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland A - DP1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Festuca sp.	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

✔ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** ✔

Remarks: (Include photo numbers here or on a separate sheet.)

Feature is located in an active row-crop field. Vegetation is heavily disturbed and sprayed regularly with herbicides.

SOIL

Sampling Point: Wetland A - DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	90	7.5YR 4/6	10	C	PL	clay loam	
8-12	2.5Y 6/2	80	7.5YR 5/6	20	C	PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

Although, the top 12 inches of soil are regularly disturbed due to row-crops, hydric features remain clear and present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland B - DP2

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.882333 Long: W 80.367255 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: R2EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of Norkett Branch. This feature is located adjacent to an active row-crop field and experiences some seasonal disturbances to vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ✔ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): 1-2"

Water Table Present? Yes ✔ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): <12"

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland B - DP2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Acer rubrum	5	Yes	FAC
2. Baccharis halimifolia	1	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	6 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Cyperus strigosus	40	Yes	FACW
2. Festuca sp.	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland B - DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/3	90	10YR 4/4	10	C	PL	loam	
6-12	2.5Y 5/2	90	7.5YR 5/4	10	C	PL	silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** ____

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland C - DP3

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0-1%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.88238 Long: W 80.364786 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: R3EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of UT1 to Norkett Branch. This feature is located adjacent to an active row-crop field and experiences significant seasonal disturbances to vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ✔ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ✔ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No _____	Depth (inches): 1-2"
Water Table Present?	Yes ✔	No _____	Depth (inches): 6-12"
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): at surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland C - DP3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Polygonum pensylvanicum	40	Yes	FACW
2. Festuca sp.	20	Yes	FAC
3. Dichanthelium clandestinum	5	No	FACW
4. Cyperus strigosus	5	No	FACW
5. Peltandra virginica	5	No	OBL
6. Juncus effusus	5	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland C - DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/2	95	7.5YR 4/4	5	C	PL	silt loam	
2-6	10YR 4/2	90	5YR 4/6	10	C	PL	silt loam	
6-12	10YR 5/2	75	7.5YR 5/8	25	C	PL	sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland D - DP4

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.88445 Long: W 80.363934 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: R3EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of UT1 to Norkett Branch. This feature is located adjacent to an active row-crop field and experiences significant seasonal disturbances to vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ✔ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ✔ Aquatic Fauna (B13)
- ✔ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No _____	Depth (inches): 4-6"
Water Table Present?	Yes ✔	No _____	Depth (inches): at surface
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): at surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland D - DP4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Typha latifolia	60	Yes	OBL
2. Peltandra virginica	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ✔ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland D - DP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/2	95	7.5YR 4/4	5	C	PL	silt loam	
2-6	10YR 4/2	90	5YR 4/6	10	C	PL	silt loam	
6-12	10YR 5/2	90	7.5YR 5/8	10	C	PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: DP5 - Upland

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.881591 Long: W 80.365851 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil ✔, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is representative of a non-jurisdictional upland area located in the floodplain of Norkett Branch.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✔	Depth (inches): >12"

Wetland Hydrology Present? **Yes** _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP5 - Upland

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Festuca sp.	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** ✔

Remarks: (Include photo numbers here or on a separate sheet.)

Area is located in an active row-crop field. Vegetation is heavily disturbed and sprayed regularly with herbicides.

SOIL

Sampling Point: DP5 - Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/4	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland E - DP6

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0-1%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.880429 Long: W 80.365517 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: R2EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of Norkett Branch. This feature is located adjacent to an active row-crop field and experiences significant seasonal disturbances to vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ✔ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✔	Depth (inches): _____
Water Table Present?	Yes ✔	No _____	Depth (inches): 6-12"
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): at surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland E - DP6

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Festuca sp.	60	Yes	FAC
2. Polygonum pensylvanicum	20	Yes	FACW
3. Rumex crispus	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation exhibits effects from seasonal herbicide treatment.

SOIL

Sampling Point: Wetland E - DP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	75	10YR 3/4	25	C	PL	silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland F - DP7

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.879076 Long: W 80.365719 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: R2EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of Norkett Branch.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ✔ Water Marks (B1)
- ✔ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ✔ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No _____	Depth (inches): 3-4"
Water Table Present?	Yes ✔	No _____	Depth (inches): 6-12"
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): at surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland F - DP7

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Fraxinus pennsylvanica	2	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Typha latifolia	40	Yes	OBL
2. Peltandra virginica	5	No	OBL
3. Cyperus strigosus	15	No	OBL
4. Polygonum pensylvanicum	10	No	FACW
5. Rumex crispus	10	No	FAC
6. Solidago canadensis	15	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland F - DP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	90	10YR 3/6	10	C	PL	silt loam	
2-12	2.5Y 5/2	80	7.5YR 5/6	20	C	PL	silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland G - DP8

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.882081 Long: W 80.366667 Datum: _____

Soil Map Unit Name: Secrest-Cid complex (ScA) NWI classification: R2EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil ✔, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of Norkett Branch. This feature is located within an active row-crop field and experiences significant seasonal disturbances to vegetation and the top layer of soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): 2-3"

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): <12"

Wetland Hydrology Present? **Yes** ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland G - DP8

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Festuca sp.	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

✔ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** ✔

Remarks: (Include photo numbers here or on a separate sheet.)

Feature is located in an active row-crop field. Vegetation is heavily disturbed and sprayed regularly with herbicides.

SOIL

Sampling Point: Wetland G - DP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	75	7.5YR 4/6	25	C	PL	silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

Although, the top 12 inches of soil are regularly disturbed due to row-crops, hydric features remain clear and present.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/16/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland H - DP9

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 0-1%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.878382 Long: W 80.374621 Datum: _____

Soil Map Unit Name: Cid channery silt loam (CmB) NWI classification: R3EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of UT2 to Norkett Branch. This feature is located within and adjacent to an active row-crop field and experiences significant seasonal disturbances to vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No _____	Depth (inches): 0.5"
Water Table Present?	Yes ✔	No _____	Depth (inches): 6-12"
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): at surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland H - DP9

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Cyperus strigosus	60	Yes	FACW
2. Polygonum pensylvanicum	5	No	FACW
3. Festuca sp.	20	Yes	FAC
4. Impatiens capensis	5	No	FACW
5. Echinochloa crus-galli	10	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation exhibits effects from seasonal herbicide treatment.

SOIL

Sampling Point: Wetland H - DP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/2	95	10YR 5/6	5	C	PL	sandy silt loam	
3-12	10YR 5/1	75	10YR 5/6	25	C	PL	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/16/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland I - DP10

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.880459 Long: W 80.374297 Datum: _____

Soil Map Unit Name: Cid channery silt loam (CmB) NWI classification: R3AB3

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located adjacent to UT2 to Norkett Branch. This feature is located within an active cattle field and experiences significant impacts from cattle trampling and grazing.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ✔ Water Marks (B1)
- ✔ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ✔ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No _____	Depth (inches): 6-12"
Water Table Present?	Yes ✔	No _____	Depth (inches): 6-12"
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): at surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland I - DP10

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Juncus effusus	20	Yes	FACW
2. Polygonum pensylvanicum	10	No	FACW
3. Festuca sp.	40	Yes	FAC
4. Echinochloa crus-galli	30	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation exhibits effects from cattle trampling and grazing.

SOIL

Sampling Point: Wetland I - DP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/16/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: Wetland J - DP11

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): toe of slope drainage Local relief (concave, convex, none): concave Slope (%): 0-1%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.882173 Long: W 80.369969 Datum: _____

Soil Map Unit Name: Cid channery silt loam (CmB) NWI classification: R2EM2

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is representative of a jurisdictional wetland area located in the floodplain of UT2 to Norkett Branch. This feature is located within an active cattle field and experiences significant disturbances to vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ✔ Water Marks (B1)
- ✔ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Sparsely Vegetated Concave Surface (B8)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✔	Depth (inches): _____
Water Table Present?	Yes ✔	No _____	Depth (inches): 12"
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): at surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: Wetland J - DP11

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	90	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Boehmeria cylindrica	5	No	FACW
2. Polygonum pensylvanicum	20	Yes	FACW
3. Festuca sp.	10	No	FAC
4. Microstegium vimineum	60	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation exhibits effects from cattle trampling and grazing.

SOIL

Sampling Point: Wetland J - DP11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3						loam	
3-10	10YR 5/2	75	7.5YR 3/4	25	C	PL	clay loam	
10-12	10YR 5/6	80	7.5YR 5/6	20	C	PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Norkett Branch Stream Mitigation Site City/County: Union Sampling Date: 8/14/12

Applicant/Owner: Wildands Engineering State: NC Sampling Point: DP12 - Upland

Investigator(s): Matt Jenkins, PWS Section, Township, Range: Lanes Creek Township

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 0%

Subregion (LRR or MLRA): MLRA 136 Lat: N 34.885821 Long: W 80.366483 Datum: _____

Soil Map Unit Name: Cid channery silt loam (CmB) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is representative of a non-jurisdictional upland area located in the floodplain of Norkett Branch.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No _____	Depth (inches): 2-4"
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 8-12"

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Feature is a low depression in an active cattle pasture.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP12 - Upland

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Festuca sp.	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** ✔

Remarks: (Include photo numbers here or on a separate sheet.)

Area is located in an active cattle pasture. Vegetation is regularly maintained and impacted from active cattle grazing and trampling.

SOIL

Sampling Point: DP12 - Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/4	75	7.5YR 2.5/3	25	C	M	silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland A | **Date** 08/14/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.882853°N, 80.367174°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active row-crop field. Vegetation is regularly mowed/plowed, soils are occasionally driven on and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☐ A	☐ A	Not severely altered
☉ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☐ A	☐ A	Water storage capacity and duration are not altered.
☉ B	☉ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☐ C	☐ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☉ D	☉ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☒ B From 30 to < 50 feet
- ☐ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☒ D	☒ D	From 40 to < 50 feet
☐ E	☐ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- [x] A Evidence of short-duration inundation (< 7 consecutive days)
- [ ] B Evidence of saturation, without evidence of inundation
- [ ] C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- [x] A Sediment deposition is not excessive, but at approximately natural levels.
- [ ] B Sediment deposition is excessive, but not overwhelming the wetland.
- [ ] C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
[ ] A	[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	[ ] D	From 25 to < 50 acres
[ ] E	[ ] E	[ ] E	From 10 to < 25 acres
[ ] F	[ ] F	[ ] F	From 5 to < 10 acres
[ ] G	[ ] G	[ ] G	From 1 to < 5 acres
[ ] H	[ ] H	[ ] H	From 0.5 to < 1 acre
[ ] I	[ ] I	[ ] I	From 0.1 to < 0.5 acre
[x] J	[x] J	[ ] J	From 0.01 to < 0.1 acre
[ ] K	[ ] K	[x] K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- [ ] A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- [ ] B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	From 10 to < 50 acres
[ ] E	[ ] E	< 10 acres
[x] F	[x] F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

[ ] Yes [ ] No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- [ ] A No artificial edge within 150 feet in all directions
- [ ] B No artificial edge within 150 feet in four (4) to seven (7) directions
- [x] C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- [ ] A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- [ ] B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- [x] C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- [ ] A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- [ ] B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- [ ] C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☐ A	☐ A	Dense herb layer
☒ B	☒ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric

Include both natural debris and man-placed natural debris.

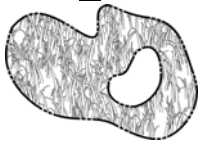
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

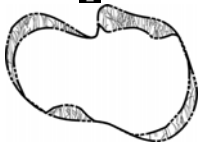
Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A

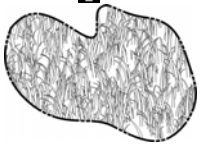
☐ B



☐ C



☐ D



22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☐ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☒ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland A	Date	08/14/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland B | **Date** 08/14/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.882333°N, 80.367255°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located adjacent an active row-crop field. Vegetation is regularly mowed, soils are occasionally driven on and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☉ A	☐ A	Not severely altered
☐ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☐ A	☐ A	Water storage capacity and duration are not altered.
☉ B	☉ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☉ C	☉ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☐ D	☐ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☒ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☐ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☐ B From 30 to < 50 feet
- ☒ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☐ D	☐ D	From 40 to < 50 feet
☒ E	☒ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- ☐ A Evidence of short-duration inundation (< 7 consecutive days)
- ☐ B Evidence of saturation, without evidence of inundation
- ☉ C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- ☉ A Sediment deposition is not excessive, but at approximately natural levels.
- ☐ B Sediment deposition is excessive, but not overwhelming the wetland.
- ☐ C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
☐ A	☐ A	☐ A	≥ 500 acres
☐ B	☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	☐ D	From 25 to < 50 acres
☐ E	☐ E	☐ E	From 10 to < 25 acres
☐ F	☐ F	☐ F	From 5 to < 10 acres
☐ G	☐ G	☐ G	From 1 to < 5 acres
☐ H	☐ H	☐ H	From 0.5 to < 1 acre
☐ I	☐ I	☐ I	From 0.1 to < 0.5 acre
☉ J	☉ J	☐ J	From 0.01 to < 0.1 acre
☐ K	☐ K	☉ K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- ☐ A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- ☐ B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
☐ A	☐ A	≥ 500 acres
☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	From 10 to < 50 acres
☐ E	☐ E	< 10 acres
☉ F	☉ F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

☐ Yes ☐ No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- ☐ A No artificial edge within 150 feet in all directions
- ☐ B No artificial edge within 150 feet in four (4) to seven (7) directions
- ☉ C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- ☐ A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- ☐ B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- ☉ C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- ☐ A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- ☐ B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- ☐ C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☒ B	☒ B	Moderate density shrub layer
☐ C	☐ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

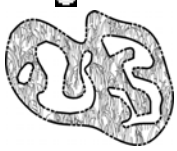
20. Large Woody Debris – wetland type condition metric

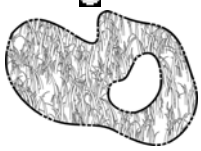
Include both natural debris and man-placed natural debris.

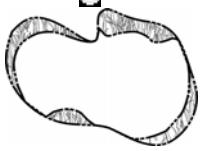
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

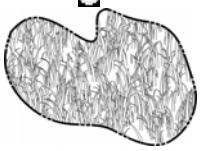
21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A 

☐ B 

☐ C 

☐ D 

22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☐ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☒ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland B	Date	08/14/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland C | **Date** 08/14/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.88238°N, 80.364786°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active row-crop field. Vegetation is regularly mowed and plowed, soils are occasionally driven on and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☉ A	☐ A	Not severely altered
☐ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☐ A	☐ A	Water storage capacity and duration are not altered.
☉ B	☉ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☐ C	☐ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☉ D	☉ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☒ B From 30 to < 50 feet
- ☐ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☒ D	☒ D	From 40 to < 50 feet
☐ E	☐ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- [x] A Evidence of short-duration inundation (< 7 consecutive days)
- [ ] B Evidence of saturation, without evidence of inundation
- [ ] C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- [x] A Sediment deposition is not excessive, but at approximately natural levels.
- [ ] B Sediment deposition is excessive, but not overwhelming the wetland.
- [ ] C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
[ ] A	[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	[ ] D	From 25 to < 50 acres
[ ] E	[ ] E	[ ] E	From 10 to < 25 acres
[ ] F	[ ] F	[ ] F	From 5 to < 10 acres
[ ] G	[ ] G	[ ] G	From 1 to < 5 acres
[ ] H	[ ] H	[ ] H	From 0.5 to < 1 acre
[x] I	[x] I	[ ] I	From 0.1 to < 0.5 acre
[ ] J	[ ] J	[ ] J	From 0.01 to < 0.1 acre
[ ] K	[ ] K	[x] K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- [ ] A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- [ ] B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	From 10 to < 50 acres
[ ] E	[ ] E	< 10 acres
[x] F	[x] F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

[ ] Yes [ ] No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- [ ] A No artificial edge within 150 feet in all directions
- [ ] B No artificial edge within 150 feet in four (4) to seven (7) directions
- [x] C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- [ ] A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- [ ] B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- [x] C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- [ ] A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- [ ] B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- [ ] C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric

Include both natural debris and man-placed natural debris.

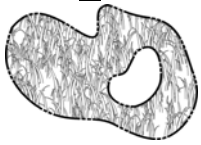
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

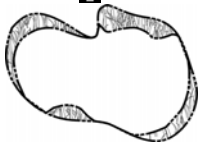
Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A

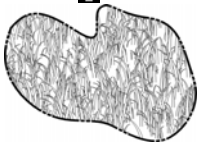
☐ B



☐ C



☐ D



22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☒ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☐ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland C	Date	08/14/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**MEDIUM**
		Condition/Opportunity	**MEDIUM**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**MEDIUM**
		Condition/Opportunity	**MEDIUM**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**MEDIUM**
		Condition/Opportunity	**MEDIUM**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**MEDIUM**
	Condition/Opportunity	**MEDIUM**
	Opportunity Presence? (Y/N)	**NO**
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland D | **Date** 08/14/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.88445°N, 80.363934°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active row-crop field. Vegetation is regularly mowed and plowed, soils are occasionally driven on and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☉ A	☐ A	Not severely altered
☐ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☉ A	☉ A	Water storage capacity and duration are not altered.
☐ B	☐ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☉ C	☉ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☐ D	☐ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☐ B From 30 to < 50 feet
- ☒ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☐ D	☐ D	From 40 to < 50 feet
☒ E	☒ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- ☐ A Evidence of short-duration inundation (< 7 consecutive days)
- ☐ B Evidence of saturation, without evidence of inundation
- ☉ C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- ☉ A Sediment deposition is not excessive, but at approximately natural levels.
- ☐ B Sediment deposition is excessive, but not overwhelming the wetland.
- ☐ C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
☐ A	☐ A	☐ A	≥ 500 acres
☐ B	☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	☐ D	From 25 to < 50 acres
☐ E	☐ E	☐ E	From 10 to < 25 acres
☐ F	☐ F	☐ F	From 5 to < 10 acres
☐ G	☐ G	☐ G	From 1 to < 5 acres
☐ H	☐ H	☐ H	From 0.5 to < 1 acre
☐ I	☐ I	☐ I	From 0.1 to < 0.5 acre
☉ J	☉ J	☐ J	From 0.01 to < 0.1 acre
☐ K	☐ K	☉ K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- ☐ A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- ☐ B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
☐ A	☐ A	≥ 500 acres
☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	From 10 to < 50 acres
☐ E	☐ E	< 10 acres
☉ F	☉ F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

☐ Yes ☐ No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- ☐ A No artificial edge within 150 feet in all directions
- ☐ B No artificial edge within 150 feet in four (4) to seven (7) directions
- ☉ C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- ☐ A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- ☐ B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- ☉ C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- ☐ A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- ☐ B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- ☐ C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric

Include both natural debris and man-placed natural debris.

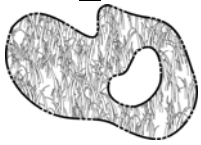
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

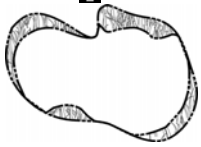
Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A

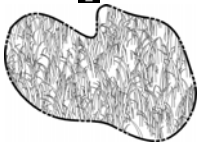
☐ B



☐ C



☐ D



22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☒ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☐ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland D	Date	08/14/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**MEDIUM**
		Condition/Opportunity	**MEDIUM**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	**NO**
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland E | **Date** 08/14/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.880429°N, 80.365517°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active row-crop field. Vegetation is regularly mowed and plowed, soils are occasionally driven on and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☐ A	☐ A	Not severely altered
☉ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☐ A	☐ A	Water storage capacity and duration are not altered.
☉ B	☉ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☐ C	☐ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☉ D	☉ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☒ B From 30 to < 50 feet
- ☐ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☒ C	☒ C	From 50 to < 80 feet
☐ D	☐ D	From 40 to < 50 feet
☐ E	☐ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- [x] A Evidence of short-duration inundation (< 7 consecutive days)
- [ ] B Evidence of saturation, without evidence of inundation
- [ ] C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- [x] A Sediment deposition is not excessive, but at approximately natural levels.
- [ ] B Sediment deposition is excessive, but not overwhelming the wetland.
- [ ] C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
[ ] A	[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	[ ] D	From 25 to < 50 acres
[ ] E	[ ] E	[ ] E	From 10 to < 25 acres
[ ] F	[ ] F	[ ] F	From 5 to < 10 acres
[ ] G	[ ] G	[ ] G	From 1 to < 5 acres
[ ] H	[ ] H	[ ] H	From 0.5 to < 1 acre
[ ] I	[ ] I	[ ] I	From 0.1 to < 0.5 acre
[x] J	[x] J	[ ] J	From 0.01 to < 0.1 acre
[ ] K	[ ] K	[x] K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- [ ] A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- [ ] B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	From 10 to < 50 acres
[ ] E	[ ] E	< 10 acres
[x] F	[x] F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

[ ] Yes [ ] No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- [ ] A No artificial edge within 150 feet in all directions
- [ ] B No artificial edge within 150 feet in four (4) to seven (7) directions
- [x] C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- [ ] A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- [ ] B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- [x] C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- [ ] A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- [ ] B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- [ ] C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

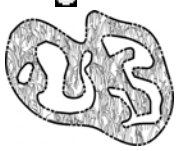
20. Large Woody Debris – wetland type condition metric

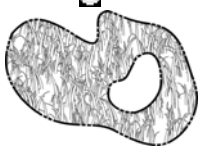
Include both natural debris and man-placed natural debris.

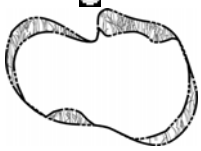
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

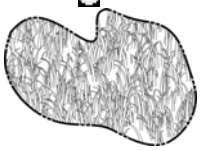
21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A 

☐ B 

☐ C 

☐ D 

22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☐ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☒ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland E	Date	08/14/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	**NO**
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland F | **Date** 08/14/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☒ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.879076°N, 80.365719°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☒ Yes ☐ No

Describe effects of stressors that are present.
Wetland located adjacent to an active row-crop field. Vegetation is regularly managed, soils are occasionally driven on, ditched and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☒ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☒ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☒ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☐ A	☐ A	Not severely altered
☒ B	☒ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☐ A	☐ A	Water storage capacity and duration are not altered.
☐ B	☒ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☒ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☒ C	☒ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☐ D	☐ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☒ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☒ A ≥ 50 feet
- ☐ B From 30 to < 50 feet
- ☐ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☒ A	☒ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☐ D	☐ D	From 40 to < 50 feet
☐ E	☐ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- ☐ A Evidence of short-duration inundation (< 7 consecutive days)
- ☐ B Evidence of saturation, without evidence of inundation
- ☉ C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- ☐ A Sediment deposition is not excessive, but at approximately natural levels.
- ☉ B Sediment deposition is excessive, but not overwhelming the wetland.
- ☐ C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
☐ A	☐ A	☐ A	≥ 500 acres
☐ B	☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	☐ D	From 25 to < 50 acres
☐ E	☐ E	☐ E	From 10 to < 25 acres
☐ F	☐ F	☐ F	From 5 to < 10 acres
☉ G	☉ G	☐ G	From 1 to < 5 acres
☐ H	☐ H	☐ H	From 0.5 to < 1 acre
☐ I	☐ I	☐ I	From 0.1 to < 0.5 acre
☐ J	☐ J	☐ J	From 0.01 to < 0.1 acre
☐ K	☐ K	☉ K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- ☐ A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- ☐ B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
☐ A	☐ A	≥ 500 acres
☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	From 10 to < 50 acres
☐ E	☐ E	< 10 acres
☉ F	☉ F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

☐ Yes ☐ No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- ☐ A No artificial edge within 150 feet in all directions
- ☐ B No artificial edge within 150 feet in four (4) to seven (7) directions
- ☉ C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- ☐ A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- ☐ B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- ☉ C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- ☐ A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- ☐ B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- ☐ C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☒ B	☒ B	Moderate density shrub layer
☐ C	☐ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

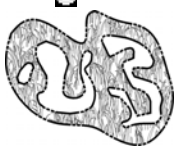
20. Large Woody Debris – wetland type condition metric

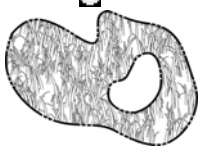
Include both natural debris and man-placed natural debris.

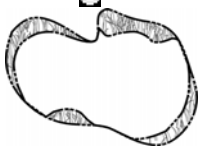
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

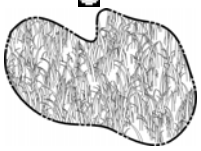
21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A 

☐ B 

☐ C 

☐ D 

22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☐ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☒ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland F	Date	08/14/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland G | **Date** 08/14/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.882081°N, 80.366667°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active row-crop field. Vegetation is regularly mowed/plowed, soils are occasionally driven on and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☐ A	☐ A	Not severely altered
☉ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☐ A	☐ A	Water storage capacity and duration are not altered.
☉ B	☉ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☐ C	☐ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☉ D	☉ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☒ B From 30 to < 50 feet
- ☐ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☒ D	☒ D	From 40 to < 50 feet
☐ E	☐ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- [x] A Evidence of short-duration inundation (< 7 consecutive days)
- [ ] B Evidence of saturation, without evidence of inundation
- [ ] C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- [x] A Sediment deposition is not excessive, but at approximately natural levels.
- [ ] B Sediment deposition is excessive, but not overwhelming the wetland.
- [ ] C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
[ ] A	[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	[ ] D	From 25 to < 50 acres
[ ] E	[ ] E	[ ] E	From 10 to < 25 acres
[ ] F	[ ] F	[ ] F	From 5 to < 10 acres
[ ] G	[ ] G	[ ] G	From 1 to < 5 acres
[ ] H	[ ] H	[ ] H	From 0.5 to < 1 acre
[x] I	[x] I	[ ] I	From 0.1 to < 0.5 acre
[ ] J	[ ] J	[ ] J	From 0.01 to < 0.1 acre
[ ] K	[ ] K	[x] K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- [ ] A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- [ ] B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	From 10 to < 50 acres
[ ] E	[ ] E	< 10 acres
[x] F	[x] F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

[ ] Yes [ ] No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- [ ] A No artificial edge within 150 feet in all directions
- [ ] B No artificial edge within 150 feet in four (4) to seven (7) directions
- [x] C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- [ ] A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- [ ] B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- [x] C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- [ ] A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- [ ] B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- [ ] C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☐ A	☐ A	Dense herb layer
☒ B	☒ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric

Include both natural debris and man-placed natural debris.

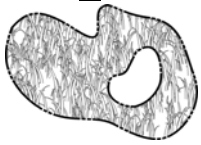
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

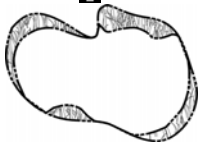
Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A

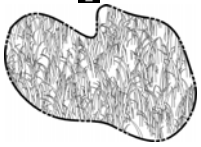
☐ B



☐ C



☐ D



22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☐ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☒ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland G	Date	08/14/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland H | **Date** 08/16/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ◉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.878382°N, 80.374621°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ◉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active row-crop field. Vegetation is regularly mowed/plowed, soils are occasionally driven on and somewhat compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
◉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ◉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ◉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☐ A	☐ A	Not severely altered
◉ B	◉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☐ A	◉ A	Water storage capacity and duration are not altered.
◉ B	☐ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☐ C	☐ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
◉ D	◉ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
◉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☒ B From 30 to < 50 feet
- ☐ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☐ D	☐ D	From 40 to < 50 feet
☒ E	☒ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- ☐ A Evidence of short-duration inundation (< 7 consecutive days)
- ☉ B Evidence of saturation, without evidence of inundation
- ☐ C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- ☉ A Sediment deposition is not excessive, but at approximately natural levels.
- ☐ B Sediment deposition is excessive, but not overwhelming the wetland.
- ☐ C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
☐ A	☐ A	☐ A	≥ 500 acres
☐ B	☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	☐ D	From 25 to < 50 acres
☐ E	☐ E	☐ E	From 10 to < 25 acres
☐ F	☐ F	☐ F	From 5 to < 10 acres
☐ G	☐ G	☐ G	From 1 to < 5 acres
☐ H	☐ H	☐ H	From 0.5 to < 1 acre
☐ I	☐ I	☐ I	From 0.1 to < 0.5 acre
☉ J	☉ J	☐ J	From 0.01 to < 0.1 acre
☐ K	☐ K	☉ K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- ☐ A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- ☐ B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
☐ A	☐ A	≥ 500 acres
☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	From 10 to < 50 acres
☐ E	☐ E	< 10 acres
☉ F	☉ F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

☐ Yes ☐ No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- ☐ A No artificial edge within 150 feet in all directions
- ☐ B No artificial edge within 150 feet in four (4) to seven (7) directions
- ☉ C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- ☐ A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- ☐ B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- ☉ C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- ☐ A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- ☐ B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- ☐ C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric

Include both natural debris and man-placed natural debris.

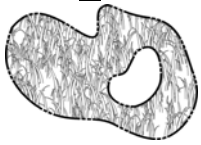
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

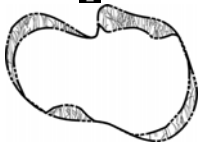
Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A

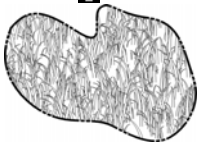
☐ B



☐ C



☐ D



22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☐ A Overbank and overland flow are not severely altered in the assessment area.
☒ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☐ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland H	Date	08/16/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**MEDIUM**
		Condition/Opportunity	**MEDIUM**
		Opportunity Presence? (Y/N)	**NO**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**NO**
	Physical Change	Condition	**MEDIUM**
		Condition/Opportunity	**MEDIUM**
		Opportunity Presence? (Y/N)	**NO**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	**NO**
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland I
Date 08/16/12
Wetland Type Bottomland Hardwood Forest
Assessor Name/Organization Matt Jenkins, PWS
Level III Ecoregion Piedmont
Nearest Named Water Body Norkett Branch
River Basin Yadkin-PeeDee
USGS 8-Digit Catalogue Unit 03040105
☐ Yes ☉ No **Precipitation within 48 hrs?**
Latitude/Longitude (deci-degrees) 34.880459°N, 80.374297°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active cattle pasture. Vegetation is regularly grazed and mowed, soils are occasionally driven on, trampled and compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☉ A	☐ A	Not severely altered
☐ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☉ A	☉ A	Water storage capacity and duration are not altered.
☐ B	☐ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☉ B	☉ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☐ C	☐ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☐ D	☐ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☉ B Evidence that maximum depth of inundation is between 1 and 2 feet
☐ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☐ B From 30 to < 50 feet
- ☒ C From 15 to < 30 feet
- ☐ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☐ D	☐ D	From 40 to < 50 feet
☐ E	☐ E	From 30 to < 40 feet
☒ F	☒ F	From 15 to < 30 feet
☐ G	☐ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- ☐ A Evidence of short-duration inundation (< 7 consecutive days)
- ☐ B Evidence of saturation, without evidence of inundation
- ☉ C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- ☐ A Sediment deposition is not excessive, but at approximately natural levels.
- ☉ B Sediment deposition is excessive, but not overwhelming the wetland.
- ☐ C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
☐ A	☐ A	☐ A	≥ 500 acres
☐ B	☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	☐ D	From 25 to < 50 acres
☐ E	☐ E	☐ E	From 10 to < 25 acres
☐ F	☐ F	☐ F	From 5 to < 10 acres
☐ G	☐ G	☐ G	From 1 to < 5 acres
☐ H	☐ H	☐ H	From 0.5 to < 1 acre
☐ I	☐ I	☐ I	From 0.1 to < 0.5 acre
☉ J	☉ J	☐ J	From 0.01 to < 0.1 acre
☐ K	☐ K	☉ K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- ☐ A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- ☐ B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
☐ A	☐ A	≥ 500 acres
☐ B	☐ B	From 100 to < 500 acres
☐ C	☐ C	From 50 to < 100 acres
☐ D	☐ D	From 10 to < 50 acres
☐ E	☐ E	< 10 acres
☉ F	☉ F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

☐ Yes ☐ No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- ☐ A No artificial edge within 150 feet in all directions
- ☐ B No artificial edge within 150 feet in four (4) to seven (7) directions
- ☉ C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- ☐ A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- ☐ B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- ☉ C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- ☐ A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- ☐ B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- ☐ C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric

Include both natural debris and man-placed natural debris.

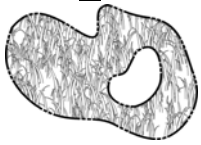
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

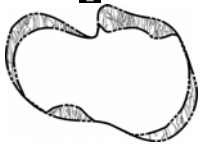
Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A

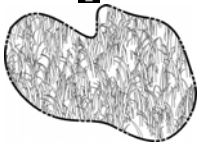
☐ B



☐ C



☐ D



22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☒ A Overbank and overland flow are not severely altered in the assessment area.
☐ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☐ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland I	Date	08/16/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**LOW**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**LOW**
		Condition/Opportunity	**MEDIUM**
		Opportunity Presence? (Y/N)	**YES**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**YES**
	Soluble Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**YES**
	Physical Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**YES**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**LOW**
Water Quality	Condition	**LOW**
	Condition/Opportunity	**LOW**
	Opportunity Presence? (Y/N)	**YES**
Habitat	Conditon	**LOW**

Overall Wetland Rating **LOW**

NC WAM WETLAND ASSESSMENT FORM
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name Norkett Branch - Wetland J | **Date** 08/16/12

Wetland Type Bottomland Hardwood Forest | **Assessor Name/Organization** Matt Jenkins, PWS

Level III Ecoregion Piedmont | **Nearest Named Water Body** Norkett Branch

River Basin Yadkin-PeeDee | **USGS 8-Digit Catalogue Unit** 03040105

☐ Yes ☉ No **Precipitation within 48 hrs?** | **Latitude/Longitude (deci-degrees)** 34.882173°N, 80.369969°W

Evidence of stressors affecting the assessment area (may not be within the assessment area)
Please circle and/or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, approximately within 10 years). Noteworthy stressors include, but are not limited to the following.

- Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.)
- Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.)
- Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.)
- Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.)

Is the assessment area intensively managed? ☉ Yes ☐ No

Describe effects of stressors that are present.
Wetland located within an active cattle pasture. Vegetation is regularly grazed and mowed, soils are occasionally driven on, trampled and compacted.

Regulatory Considerations
Select all that apply to the assessment area.

☐ Anadromous fish
☐ Federally protected species or State endangered or threatened species
☐ NCDWQ riparian buffer rule in effect
☐ Abuts a Primary Nursery Area (PNA)
☐ Publicly owned property
☐ N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer)
☐ Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout
☐ Designated NCNHP reference community
☐ Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream

What type of natural stream is associated with the wetland, if any? (Check all that apply)

☐ Blackwater
☉ Brownwater
☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both

Is the assessment area on a coastal island? ☐ Yes ☉ No

Is the assessment area's surface water storage capacity or duration substantially altered by beaver? ☐ Yes ☉ No

1. Ground Surface Condition/Vegetation Condition – assessment area condition metric
Check a box in each column. Consider alteration to the ground surface (GS) in the assessment area and vegetation structure (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual). If a reference is not applicable, then rate the assessment area based on evidence of an effect.

GS	VS	
☉ A	☐ A	Not severely altered
☐ B	☉ B	Severely altered over a majority of the assessment area (ground surface alteration examples: vehicle tracks, excessive sedimentation, fire-plow lanes, skidder tracks, bedding, fill, soil compaction, obvious pollutants) (vegetation structure alteration examples: mechanical disturbance, herbicides, salt intrusion [where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)

2. Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the current NRCS lateral effect of ditching guidance for North Carolina hydric soils (see USACE Wilmington District website) for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and ditch sub-surface water. Consider tidal flooding regime, if applicable.

Surf	Sub	
☉ A	☉ A	Water storage capacity and duration are not altered.
☐ B	☐ B	Water storage capacity or duration are altered, but not substantially (typically, not sufficient to change vegetation).
☐ C	☐ C	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: draining, flooding, soil compaction, filling, excessive sedimentation, underground utility lines).

3. Water Storage/Surface Relief – assessment area/wetland type condition metric
Check a box in each column for each group below. Select the appropriate storage for the assessment area (AA) and the wetland type (WT).

AA	WT	
☐ A	☐ A	Majority of wetland with depressions able to pond water > 1 foot deep
☐ B	☐ B	Majority of wetland with depressions able to pond water 6 inches to 1 foot deep
☉ C	☉ C	Majority of wetland with depressions able to pond water 3 to 6 inches deep
☐ D	☐ D	Depressions able to pond water < 3 inches deep

☐ A Evidence that maximum depth of inundation is greater than 2 feet
☐ B Evidence that maximum depth of inundation is between 1 and 2 feet
☉ C Evidence that maximum depth of inundation is less than 1 foot

4. Soil Texture/Structure – assessment area condition metric

Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the 12 inches. Use most recent National Technical Committee for Hydric Soils guidance for regional indicators.

- ☐ A Sandy soil
- ☒ B Loamy or clayey soils exhibiting redoxymorphic features (concentrations, depletions, or rhizospheres)
- ☐ C Loamy or clayey soils not exhibiting redoxymorphic features
- ☐ D Loamy or clayey gleyed soil
- ☐ E Histosol or histic epipedon

- ☒ A Soil ribbon < 1 inch
- ☐ B Soil ribbon ≥ 1 inch

- ☒ A No peat or muck presence
- ☐ B A peat or muck presence

5. Discharge into Wetland – opportunity metric

Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.

Surf	Sub	
☐ A	☒ A	Little or no evidence of pollutants or discharges entering the assessment area
☒ B	☐ B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
☐ C	☐ C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)

6. Land Use – opportunity metric

Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont ecoregions and 30 feet wide in the Blue Ridge Mountains ecoregion.

WS	5M	2M	
☐ A	☐ A	☐ A	≥ 10% impervious surfaces
☑ B	☑ B	☑ B	< 10% impervious surfaces
☑ C	☑ C	☑ C	Confined animal operations (or other local, concentrated source of pollutants)
☑ D	☑ D	☑ D	≥ 20% coverage of pasture
☑ E	☑ E	☑ E	≥ 20% coverage of agricultural land (regularly plowed land)
☑ F	☑ F	☑ F	≥ 20% coverage of maintained grass/herb
☐ G	☐ G	☐ G	≥ 20% coverage of silvicultural land characterized by a clear-cut < 5 years old
☐ H	☐ H	☐ H	Little or no opportunity to improve water quality. Lack of opportunity may result from hydrologic alterations that prevent drainage or overbank flow from affecting the assessment area.

7. Wetland Acting as Vegetated Buffer – assessment area condition metric

7a. Is assessment area within 50 feet of a tributary or other open water?

☒ Yes ☐ No If Yes, continue to 7b. If No, skip to Metric 8.

Wetland buffer need only be present on one side of the water body. Make buffer judgment based on the average width of the wetland. Record a note if a portion of the buffer has been removed or disturbed.

7b. How much of the first 50 feet from the bank is weltand? Descriptor E should be selected if ditches effectively bypass the buffer.

- ☐ A ≥ 50 feet
- ☐ B From 30 to < 50 feet
- ☐ C From 15 to < 30 feet
- ☒ D From 5 to < 15 feet
- ☐ E < 5 feet or buffer bypassed by ditches

7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.

☒ ≤ 15-feet wide ☐ > 15-feet wide ☐ Other open water (no tributary present)

7d. Do roots of assessment area vegetation extend into the bank of the tributary/open water?

☒ Yes ☐ No

7e. Is tributary or other open water sheltered or exposed?

- ☒ Sheltered – adjacent open water with width < 2500 feet and no regular boat traffic.
- ☐ Exposed – adjacent open water with width ≥ 2500 feet or regular boat traffic.

8. Wetland Width at the Assessment Area – wetland type/wetland complex metric

Check a box in each column for riverine wetlands only. Select the appropriate width for the wetland type at the assessment area (WT) and the wetland complex at the assessment areas (WC). See User Manual for WT and WC boundaries.

WT	WC	
☐ A	☐ A	≥ 100 feet
☐ B	☐ B	From 80 to < 100 feet
☐ C	☐ C	From 50 to < 80 feet
☐ D	☐ D	From 40 to < 50 feet
☐ E	☐ E	From 30 to < 40 feet
☐ F	☐ F	From 15 to < 30 feet
☒ G	☒ G	From 5 to < 15 feet
☐ H	☐ H	< 5 feet

9. Inundation Duration – assessment area condition metric

Answer for assessment area dominant landform.

- [x] A Evidence of short-duration inundation (< 7 consecutive days)
- [ ] B Evidence of saturation, without evidence of inundation
- [ ] C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)

10. Indicators of Deposition – assessment area condition metric

Consider recent deposition only (no plant growth since deposition).

- [ ] A Sediment deposition is not excessive, but at approximately natural levels.
- [x] B Sediment deposition is excessive, but not overwhelming the wetland.
- [ ] C Sediment deposition is excessive and is overwhelming the wetland.

11. Wetland Size – wetland type/wetland complex condition metric

Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column.

WT	WC	FW (if applicable)	
[ ] A	[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	[ ] D	From 25 to < 50 acres
[ ] E	[ ] E	[ ] E	From 10 to < 25 acres
[ ] F	[ ] F	[ ] F	From 5 to < 10 acres
[ ] G	[ ] G	[ ] G	From 1 to < 5 acres
[ ] H	[ ] H	[ ] H	From 0.5 to < 1 acre
[ ] I	[ ] I	[ ] I	From 0.1 to < 0.5 acre
[x] J	[x] J	[ ] J	From 0.01 to < 0.1 acre
[ ] K	[ ] K	[x] K	< 0.01 acre or assessment area is clear-cut

12. Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)

- [ ] A Pocosin is the full extent (≥ 90%) of its natural landscape size.
- [ ] B Pocosin is < 90% of the full extent of its natural landscape size.

13. Connectivity to Other Natural Areas – landscape condition metric

13a. **Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment.** This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture open and agriculture), or water > 300 feet wide.

Well	Loosely	
[ ] A	[ ] A	≥ 500 acres
[ ] B	[ ] B	From 100 to < 500 acres
[ ] C	[ ] C	From 50 to < 100 acres
[ ] D	[ ] D	From 10 to < 50 acres
[ ] E	[x] E	< 10 acres
[x] F	[ ] F	Wetland type has a poor or no connection to other natural habitats

13b. **Evaluate for marshes only**.

[ ] Yes [ ] No Wetland type has a surface hydrology connection to open waters/stream or tidal wetlands.

14. Edge Effect – wetland type condition metric

May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass.

- [ ] A No artificial edge within 150 feet in all directions
- [ ] B No artificial edge within 150 feet in four (4) to seven (7) directions
- [x] C An artificial edge occurs within 150 feet in more than four (4) directions or assessment area is clear-cut

15. Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)

- [ ] A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area.
- [ ] B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
- [x] C Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.

16. Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)

- [ ] A Vegetation diversity is high and is composed primarily of native species (<10% cover of exotics).
- [ ] B Vegetation diversity is low or has > 10% to 50% cover of exotics.
- [ ] C Vegetation is dominated by exotic species (>50% cover of exotics).

☐

17. Vegetative Structure – assessment area/wetland type condition metric

17a. Is vegetation present?

☒ Yes ☐ No If Yes, continue to 17b. If No, skip to Metric 18.

17b. Evaluate percent coverage of vegetation **for all marshes only**. Skip to 17c for non-marsh wetlands.

☐ A ≥ 25% coverage of vegetation
☐ B < 25% coverage of vegetation

17c. **Check a box in each column for each stratum**. Evaluate this portion of the metric **for non-marsh wetlands**. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.

AA	WT	
☐ A	☐ A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
☐ B	☐ B	Canopy present, but opened more than natural gaps
☒ C	☒ C	Canopy sparse or absent
☐ A	☐ A	Dense mid-story/sapling layer
☐ B	☐ B	Moderate density mid-story/sapling layer
☒ C	☒ C	Mid-story/sapling layer sparse or absent
☐ A	☐ A	Dense shrub layer
☐ B	☐ B	Moderate density shrub layer
☒ C	☒ C	Shrub layer sparse or absent
☒ A	☒ A	Dense herb layer
☐ B	☐ B	Moderate density herb layer
☐ C	☐ C	Herb layer sparse or absent

18. Snags – wetland type condition metric

☐ A Large snags (more than one) are visible (> 12-inches DBH, or large relative to species present and landscape stability).
☒ B Not A

19. Diameter Class Distribution – wetland type condition metric

☐ A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
☐ B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12-inch DBH.
☒ C Majority of canopy trees are < 6 inches DBH or no trees.

20. Large Woody Debris – wetland type condition metric

Include both natural debris and man-placed natural debris.

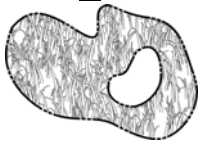
☐ A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
☒ B Not A

21. Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

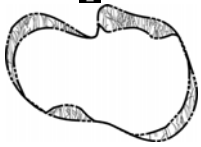
Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.

☐ A

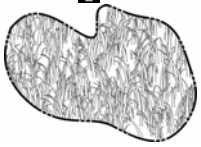
☐ B



☐ C



☐ D



22. Hydrologic Connectivity – assessment area condition metric

Evaluate for riverine wetlands only. Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision.

☒ A Overbank and overland flow are not severely altered in the assessment area.
☐ B Overbank flow is severely altered in the assessment area.
☐ C Overland flow is severely altered in the assessment area.
☐ D Both overbank and overland flow are severely altered in the assessment area.

Notes

NC WAM Wetland Rating Sheet
Accompanies User Manual Version 3.0
Rating Calculator Version 3.0

Wetland Site Name	Norkett Branch - Wetland J	Date	08/16/12
Wetland Type	Bottomland Hardwood Forest	Assessor Name/Organization	Matt Jenkins, PWS

Presence of stressor affecting assessment area (Y/N)	YES
Notes on Field Assessment Form (Y/N)	NO
Presence of regulatory considerations (Y/N)	NO
Wetland is intensively managed (Y/N)	YES
Assessment area is located within 50 feet of a natural tributary or other open water (Y/N)	YES
Assessment area is substantially altered by beaver (Y/N)	NO

Sub-function Rating Summary

Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	**MEDIUM**
	Sub-Surface Storage and Retention	Condition	**MEDIUM**
Water Quality	Pathogen Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**YES**
	Particulate Change	Condition	**LOW**
		Condition/Opportunity	**LOW**
		Opportunity Presence? (Y/N)	**YES**
	Soluble Change	Condition	**HIGH**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**YES**
	Physical Change	Condition	**MEDIUM**
		Condition/Opportunity	**HIGH**
		Opportunity Presence? (Y/N)	**YES**
	Pollution Change	Condition	NA
		Condition/Opportunity	NA
		Opportunity Presence? (Y/N)	NA
Habitat	Physical Structure	Condition	**LOW**
	Landscape Patch Structure	Condition	**LOW**
	Vegetation Composition	Condition	**LOW**

Function Rating Summary

Function	Metrics/Notes	Rating
Hydrology	Condition	**MEDIUM**
Water Quality	Condition	**HIGH**
	Condition/Opportunity	**HIGH**
	Opportunity Presence? (Y/N)	**YES**
Habitat	Conditon	**LOW**

Overall Wetland Rating **MEDIUM**

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Asheville Regional Office

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Norkett Branch Stream Mitigation Site - Norkett Branch and Wetlands A, B, E, F, and G

State:NC County/parish/borough: Union City: Marshville
Center coordinates of site (lat/long in degree decimal format): Lat. 34.881565° **N**, Long. 80.3729526° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Norkett Branch

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Norkett Branch
Name of watershed or Hydrologic Unit Code (HUC): Yadkin River 03040105

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: August 14, 2012
☒ Field Determination. Date(s): September 25, 2012

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): [1]

☐ TNWs, including territorial seas
☐ Wetlands adjacent to TNWs
☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
☐ Non-RPWs that flow directly or indirectly into TNWs
☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:
Non-wetland waters: 3,672 linear feet: 15-20 width (ft) and/or 1.50 acres.
Wetlands: 1.65 acres.

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**
Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **Pick List**
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size:1.65acres

Wetland type. Explain:riverine lower perennial emergent.

Wetland quality. Explain:impacted by row cropping and cattle grazing.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: .

Surface flow is**: Discrete**

Characteristics: flow is over floodplain areas from groundwater seeps and overland flow.

Subsurface flow: **Yes**. Explain findings: groundwater in soil borings.

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☒ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **5 - 10-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: located in active cattle field and row crop field, regularly impacted and maintained.

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/percent cover. Explain:FACW 100% herbaceous cover.
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **5**

Approximately (1.65) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Wetland A - Y	0.04	Wetland B - Y	0.05
Wetland E - Y	0.08	Wetland F - Y	1.38
Wetland G - Y	0.10		

Summarize overall biological, chemical and physical functions being performed: features provide water treatment and flood storage.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: This channel exhibited average bankfull widths of 15 to 25 feet, well-defined riffle-pool sequences, and substrate consisting of gravel to large cobble. This project reach is located entirely within active cattle pastures and row-crop fields. As a result, the channel banks exhibit a lack of suitable stabilizing vegetation which has led to portions of incision and bank degradation. The channel has several existing agricultural crossings, the most upstream of which has filled in resulting in overbank flows and floodplain erosion. Biological sampling within this channel resulted in an abundant presence of fish and a moderate presence of amphibians. Norkett Branch scored 47 and 52 out of a possible 100 points on the USACE Stream

Assessment Form and scored 41.5 and 43.75 out of 61.5 possible points on the NCDWQ Stream Classification Form, indicating perennial status (SCP5 and SCP8).

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

☒ Tributary waters: **3,672** linear feet**15-20** width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: **.**

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetlands A, B, E, F, and G are directly connected to Norkett Branch via direct surface water connections.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: **1.65**acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.[9]

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ Demonstrate that impoundment was created from "waters of the U.S.," or

☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

[8] See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:Midland, NC.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Union County Soils.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): .

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[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

or ☒ Other (Name & Date):see attached report.

☐ Previous determination(s). File no. and date of response letter: .

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Asheville Regional Office

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Norkett Branch Stream Mitigation Site - UT1, Wetlands C and D
State:NC County/parish/borough: Union City: Marshville
Center coordinates of site (lat/long in degree decimal format): Lat. 34.881565° **N**, Long. 80.3729526° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Norkett Branch
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Norkett Branch
Name of watershed or Hydrologic Unit Code (HUC): Yadkin River 03040105
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: August 14, 2012
☒ Field Determination. Date(s): September 25, 2012

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 960 linear feet: 8-10 width (ft) and/or 0.20 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: 2,034 **acres**
Drainage area: 48 **acres**
Average annual rainfall: 40 inches
Average annual snowfall: 6 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **2** tributaries before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: UT1 flows to Norkett Branch, to Lanes Creek.
Tributary stream order, if known: First.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: maintenance from row-crop fields.

Tributary properties with respect to top of bank (estimate):
Average width: 8-10 feet
Average depth: 2-3 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: vertical banks from past ditching.
Presence of run/riffle/pool complexes. Explain: weak presence, poorly-defined.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1.0 %

(c) Flow:

Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **No**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: the upstream intermittent portion exhibits seasonal/intermittent flow, stream is degraded from row-cropping impacts.
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): narrow, dominated by invasive shrub & vine species.
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size:0.26acres

Wetland type. Explain:riverine upper perennial emergent.

Wetland quality. Explain:low, impacted by adjacent row-cropping impacts, vegetation maintenance.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Perennial flow**. Explain: .

Surface flow is**: Discrete**

Characteristics: .

Subsurface flow: **Yes**. Explain findings: evidence of high water table in soil cores.

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☒ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **2 - 5-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: exhibited water marks, surface water from 1 to 2 inches, water-stained leaves, oxidized rhizospheres, drainage patterns, low chroma soils (2.5Y 3/2, 10YR 4/2, and 10YR 5/2), and many distinct mottles (8.5YR 4/4, 5YR 4/6, and 7.5YR 5/8). This area experiences vegetation impacts from regular agriculture maintenance..

Identify specific pollutants, if known: N/A.

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/percent cover. Explain:FACW/OBL 100%, herbaceous.
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **2**

Approximately (0.26) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Wetland C - Y	0.19		
Wetland D - Y	0.07		

Summarize overall biological, chemical and physical functions being performed: wetland features provide minimal water treatment and flood storage.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: The majority of UT1 was classified as a perennial RPW, with a small portion at the upstream end of the project area classified as Intermittent RPW. This channel exhibited average bankfull widths of 8-10 feet, moderate to strong baseflow conditions, a well-defined valley with a narrow floodplain, weak riffle structures, and substrate consisting of coarse sand and gravel. The entire length of UT1 is located within an active row-crop field and experiences periodic impacts from channel ditching and maintenance resulting in vertical stream banks and a lack of suitable rooted vegetation. The riparian area of this reach is largely dominated by invasive vine and shrub species of honeysuckle and privet. Biological sampling of this

channel resulted in a weak presence of fish and amphibians throughout the downstream portion. UT1 scored 20 (intermittent portion) and 34 (perennial portion) out of a possible 100 points on the USACE Stream Assessment Form and scored 25.25 and 32.25 out of 61.5 possible points on the NCDWQ Stream Classification Form, indicating intermittent and perennial status, respectively (SCP6 and SCP7).

☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: The majority of UT1 was classified as a perennial RPW, with a small portion at the upstream end of the project area classified as Intermittent RPW. This channel exhibited average bankfull widths of 8-10 feet, moderate to strong baseflow conditions, a well-defined valley with a narrow floodplain, weak riffle structures, and substrate consisting of coarse sand and gravel. The entire length of UT1 is located within an active row-crop field and experiences periodic impacts from channel ditching and maintenance resulting in vertical stream banks and a lack of suitable rooted vegetation. The riparian area of this reach is largely dominated by invasive vine and shrub species of honeysuckle and privet. Biological sampling of this channel resulted in a weak presence of fish and amphibians throughout the downstream portion. UT1 scored 20 (intermittent portion) and 34 (perennial portion) out of a possible 100 points on the USACE Stream Assessment Form and scored 25.25 and 32.25 out of 61.5 possible points on the NCDWQ Stream Classification Form, indicating intermittent and perennial status, respectively (SCP6 and SCP7).

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **960** linear feet **8-10** width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetlands C and D are directly connected to UT1 via surface water connections.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: **0.26**acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.[9]

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
- ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ U.S. Geological Survey Hydrologic Atlas: .

[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:Midland, NC.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Union County Soils.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): .
or ☒ Other (Name & Date):see attached report.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Asheville Regional Office

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Norkett Branch Stream Mitigation Site - UT2, Wetlands H, I, and J

State:NC County/parish/borough: Union City: Marshville
Center coordinates of site (lat/long in degree decimal format): Lat. 34.881565° **N**, Long. 80.3729526° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Norkett Branch

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Norkett Branch
Name of watershed or Hydrologic Unit Code (HUC): Yadkin River 03040105

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: August 14, 2012
☒ Field Determination. Date(s): September 25, 2012

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): [1]

☐ TNWs, including territorial seas
☐ Wetlands adjacent to TNWs
☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
☐ Non-RPWs that flow directly or indirectly into TNWs
☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:
Non-wetland waters: 3,561 linear feet: 6 width (ft) and/or 0.50 acres.
Wetlands: 0.15 acres.

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**
Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **Pick List**
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size:0.15acres

Wetland type. Explain:riverine upper and lower perennial emergent, and riverine aquatic bed.

Wetland quality. Explain:impacted by row cropping and cattle grazing.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: .

Surface flow is**: Discrete and confined**

Characteristics: .

Subsurface flow: **Yes**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☒ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **2 - 5-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: located in active cattle field and row crop field, regularly impacted and maintained.

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/percent cover. Explain:FACW 100% herbaceous cover.
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **3**

Approximately (0.15) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Wetland H - Y	0.07		
Wetland I - Y	0.04		
Wetland J - Y	0.04		

Summarize overall biological, chemical and physical functions being performed: features provide minimal water treatment and flood storage.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: This reach exhibited strong baseflow conditions fed by the upstream pond, well-defined riffle-pool sequences, moderate sinuosity, depositional bars and benches, and strong grade control from large cobble substrate. A large upstream portion of this reach is located within an active-row crop field; this portion exhibits impacts from regular maintenance including an overly-wide channel bed and low slope banks. UT2 transitions to an active cattle pasture where this reach exhibits a lack of riparian vegetation and bed trampling from cattle grazing. Biological sampling of this channel resulted in a weak presence of benthic macroinvertebrates and amphibians. UT2 scored 34 out of a possible 100 points on the USACE

Stream Assessment Form and scored 35.75 out of 61.5 possible points on the NCDWQ Stream Classification Form, indicating perennial status (SCP1).

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

☒ Tributary waters: **3,561** linear feet**6** width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: **.**

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetlands H, I, and J are directly connected to Perennial Stream UT2 via direct surface water connections.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: **0.15**acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.[9]

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ Demonstrate that impoundment was created from "waters of the U.S.," or

☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

[8] See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:Midland, NC.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Union County Soils.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): .

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[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

or ☒ Other (Name & Date):see attached report.

☐ Previous determination(s). File no. and date of response letter: .

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Asheville Regional Office

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Norkett Branch Stream Mitigation Site - UT2A
State:NC County/parish/borough: Union City: Marshville
Center coordinates of site (lat/long in degree decimal format): Lat. 34.881565° **N**, Long. 80.3729526° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Norkett Branch
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Norkett Branch
Name of watershed or Hydrologic Unit Code (HUC): Yadkin River 03040105
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: August 14, 2012
☒ Field Determination. Date(s): September 25, 2012

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 1,330 linear feet: 4-6 width (ft) and/or 0.15 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: 457 **acres**
Drainage area: 64 **acres**
Average annual rainfall: 40 inches
Average annual snowfall: 6 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **3** tributaries before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: UT2A flows to UT2, to Norkett Branch, to Lanes Creek.
Tributary stream order, if known: First.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: cattle grazing and maintenance.

Tributary properties with respect to top of bank (estimate):
Average width: 4-6 feet
Average depth: 1-2 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: trampled bed and banks from cattle.
Presence of run/riffle/pool complexes. Explain: weak presence, poorly-defined.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 0.5-1.0 %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **No**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: the upstream intermittent portion exhibits seasonal/intermittent flow, stream is degraded from cattle impacts.
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is**: Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: The majority of UT2A was classified as an intermittent RPW, with a small downstream portion classified as perennial RPW. This channel exhibited average bankfull widths of 4-6 feet, weak to moderate baseflow conditions, a large active floodplain, weak to moderate riffle structures, low sinuosity, and substrate consisting of gravel to small cobbles. UT2A is located within an active cattle pasture and completely lacks a riparian buffer due to active grazing. Eroding channel banks and bed trampling is common throughout this reach. Biological sampling of this channel showed little to no aquatic fauna. UT2A scored 25 (intermittent portion) and 32 (perennial portion) out of a possible 100 points on the

USACE Stream Assessment Form and scored 23 and 30.75 out of 61.5 possible points on the NCDWQ Stream Classification Form, indicating intermittent and perennial status, respectively (SCP2 and SCP3)..

☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: The majority of UT2A was classified as an intermittent RPW, with a small downstream portion classified as perennial RPW. This channel exhibited average bankfull widths of 4-6 feet, weak to moderate baseflow conditions, a large active floodplain, weak to moderate riffle structures, low sinuosity, and substrate consisting of gravel to small cobbles. UT2A is located within an active cattle pasture and completely lacks a riparian buffer due to active grazing. Eroding channel banks and bed trampling is common throughout this reach. Biological sampling of this channel showed little to no aquatic fauna. UT2A scored 25 (intermittent portion) and 32 (perennial portion) out of a possible 100 points on the USACE Stream Assessment Form and scored 23 and 30.75 out of 61.5 possible points on the NCDWQ Stream Classification Form, indicating intermittent and perennial status, respectively (SCP2 and SCP3)..

Provide estimates for jurisdictional waters in the review area (check all that apply):

☒ Tributary waters: **1,330** linear feet **4-6** width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.[9]

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ Demonstrate that impoundment was created from "waters of the U.S.," or

☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

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[8] See Footnote # 3.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:Midland, NC.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Union County Soils.

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[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): .
  or ☒ Other (Name & Date):see attached report.
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Asheville Regional Office

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Norkett Branch Stream Mitigation Site - UT3
State:NC County/parish/borough: Union City: Marshville
Center coordinates of site (lat/long in degree decimal format): Lat. 34.881565° **N**, Long. 80.3729526° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Norkett Branch
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Norkett Branch
Name of watershed or Hydrologic Unit Code (HUC): Yadkin River 03040105
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: August 14, 2012
☒ Field Determination. Date(s): September 25, 2012

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 151 linear feet: 2-4 width (ft) and/or 0.01 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: 2,034 **acres**
Drainage area: 28 **acres**
Average annual rainfall: 40 inches
Average annual snowfall: 6 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **2** tributaries before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: UT3 flows to Norkett Branch, to Lanes Creek.
Tributary stream order, if known: First.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: cattle grazing and maintenance.

Tributary properties with respect to top of bank (estimate):
Average width: 2-4 feet
Average depth: 1-2 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: trampled bed and banks from cattle.
Presence of run/riffle/pool complexes. Explain: weak presence, poorly-defined.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 0.5-1.0 %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **No**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: exhibits seasonal/intermittent flow, stream is degraded from cattle impacts.
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is**: Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: UT3 was classified as an intermittent RPW along its entire reach and exhibited weak baseflow conditions, a moderate amount of FACW vegetation in the channel bed, weak sinuosity, and substrate consisting of coarse sand to gravel. Despite active cattle grazing and a lack of suitable riparian vegetation, this channel exhibits a relatively stable bed and bank. Biological sampling of this channel showed little to no aquatic fauna. UT3 scored 23 out of a possible 100 points on the

USACE Stream Assessment Form and scored 25.75 out of 61.5 possible points on the NCDWQ Stream Classification Form, indicating perennial status (SCP4).

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **151** linear feet**2-4** width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: **.**

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.[9]
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:Midland, NC.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:Union County Soils.
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): .
or ☒ Other (Name & Date):see attached report.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action I.D.: SAW-2012-01082 County: Union U.S.G.S. Quad: Marshville

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property Owner/Agent: **Wildlands Engineering, Inc / Attn: Matt Jenkins**
Address: **1430 South Mint Street, #104 Charlotte, NC 28203**
Telephone No.: **704-332-7754**

Property description:
Size (acres): 29.7 acre easement
Nearest Waterway: Norkett Branch
Coordinates: 35.88177 / -80.36641
Nearest Town: Monroe
River Basin: Rocky Watershed; Upper Pee Dee Basin
Hydrologic Unit Code: 03040105

Location Description: The Norkett Branch Stream Mitigation Site is located off Philadelphia Church Rd in the southeastern portion of Union County, ~11 miles south of Monroe and ~5 miles east of Hwy 601.

Indicate Which of the Following Apply:

A. Preliminary Determination

_ Based on preliminary information, there may be waters and wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).). If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

B. Approved Determination

_ There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X There are waters and wetlands on the above described property subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ We strongly suggest you have the waters and wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

X_ The waters and wetlands on your property have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

_ The waters and wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on _____. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

Action Id.: **SAW-2012-01082**

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Steve Kichefski** at **828-271-7980**.

C. Basis For Determination

The site contains wetlands as determined by the *1987 Corps of Engineers Wetland Delineation Manual* and the *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Eastern Mountain and Piedmont Region*. These wetlands are adjacent to stream channels located on the property that exhibit indicators of ordinary high water marks. The stream channel on the property is an unnamed tributary to Norkett Branchorkett Branch which flows into the Rocky Watershed; Upper Pee Dee Basin River. UT to Norkett Branch flows to the Atlantic Ocean via Norkett Branch, Lanes Creek, the Rocky River and the Pee Dee River. The Pee Dee River is a Section 10 navigable water at the Blewett Falls Dam.

D. Remarks:

E. Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information **(This information applies only to approved jurisdictional determinations as indicated in B. above)**

Attached to this verification is an approved jurisdictional determination. If you are not in agreement with that approved jurisdictional determination, you can make an administrative appeal under 33 CFR 331. Enclosed you will find a request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Jason Steele, Review Officer
60 Forsyth Street SW, Room 10M15
Atlanta, Georgia 30303-8801

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by February12, 2012.

It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: Steve Kichefski SK

Issue Date: **December 14, 2012** Expiration Date: **December 14, 2017**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at http://per2.nwp.usace.army.mil/survey.html to complete the survey online.

CF:

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Wildlands Engineering, Inc / Attn: Matt Jenkins	File Number: SAW-2012-01082	Date: December 14, 2012
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Steve Kichefski, Project Manager USACE, Asheville Regulatory Field Office 151 Patton Ave RM 208 Asheville, NC 28806 828-271-7980	Mr. Jason Steele, Administrative Appeal Review Officer CESAD-PDO U.S. Army Corps of Engineers, South Atlantic Division 60 Forsyth Street, Room 10M15 Atlanta, Georgia 30303-8801 Phone: (404) 562-5137

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

For appeals on Initial Proffered Permits send this form to:

District Engineer, Wilmington Regulatory Division, Attn: Steve Kichefski, 69 Darlington Avenue, Wilmington, North Carolina 28403

For Permit denials, Proffered Permits and approved Jurisdictional Determinations send this form to:

Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Jason Steele, Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-8801 Phone: (404) 562-5137

APPENDIX 3. Project Site NCDWQ Stream Classification & USACE Stream Quality Assessment Worksheets

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** NORKETT BRANCH	**Latitude:** 34.881565° N
Evaluator: MLJ	**County:** UNION	**Longitude:** 80.372952° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 35.75	**Stream Determination (circle one)** Ephemeral Intermittent (Perennial)	**Other** SCPI – UT2 *e.g. Quad Name:*

A. Geomorphology (Subtotal = 23.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	1	2	(3)
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	1	(2)	3
9. Grade control	0	0.5	1	(1.5)
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = 0		Yes = (3)	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7.5)				
12. Presence of Baseflow	0	(1)	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	(1.5)	1	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.75)				
18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** NORKETT BRANCH	**Latitude:** 34.883736° N
Evaluator: MLJ	**County:** UNION	**Longitude:** 80.373774° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 23	**Stream Determination (circle one)** Ephemeral (Intermittent) Perennial	**Other** SCP2 - UT2A *e.g. Quad Name:*

A. Geomorphology (Subtotal = 14)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 6)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	(1.5)	1	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 3)				
18. Fibrous roots in streambed	3	2	1	(0)
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = (0)			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** NORKETT BRANCH	**Latitude:** 34.882158° N
Evaluator: MLJ	**County:** UNION	**Longitude:** 80.372019° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 30.75	**Stream Determination (circle one)** Ephemeral Intermittent (Perennial)	**Other** SCP3 - UT2A *e.g. Quad Name:*

A. Geomorphology (Subtotal = 19)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	1	2	(3)
6. Depositional bars or benches	0	1	(2)	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7)				
12. Presence of Baseflow	0	(1)	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	(1.5)	1	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.75)				
18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** Norkett Branch	**Latitude:** 34.885001° N
Evaluator: MLJ	**County:** Union	**Longitude:** 80.365046° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 25.75	**Stream Determination (circle one)** Ephemeral (Intermittent) Perennial	**Other** SCP4 - UT3 *e.g. Quad Name:*

A. Geomorphology (Subtotal = 14.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	1	(2)	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 6.5)				
12. Presence of Baseflow	0	(1)	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	(1.5)	1	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.75)				
18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** NORKETT BRANCH	**Latitude:** 34.882902° N
Evaluator: MLS	**County:** UNION	**Longitude:** 80.367342° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 43.75	**Stream Determination (circle one)** Ephemeral Intermittent (Perennial)	**Other** SCP5 - *e.g. Quad Name:* NORKETT BRANCH

A. Geomorphology (Subtotal = 25)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	(3)
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	1	(2)	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	1	2	(3)
9. Grade control	0	0.5	1	(1.5)
10. Natural valley	0	0.5	1	(1.5)
11. Second or greater order channel	No = 0		Yes = (3)	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 9)				
12. Presence of Baseflow	0	1	2	(3)
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 9.75)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	(1)	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	0	0.5	1	(1.5)
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	0	0.5	(1)	1.5
25. Algae	0	(0.5)	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** NORKETT BRANCH	**Latitude:** 34.882152° N
Evaluator: MLJ	**County:** UNION	**Longitude:** 80.364946° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 32.25	**Stream Determination (circle one)** Ephemeral Intermittent (Perennial)	**Other** SCP6 - UT1 *e.g. Quad Name:*

A. Geomorphology (Subtotal = 17)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	1	(2)	3
9. Grade control	0	0.5	1	(1.5)
10. Natural valley	0	0.5	1	(1.5)
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 8.5)				
12. Presence of Baseflow	0	1	(2)	3
13. Iron oxidizing bacteria	0	(1)	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 6.75)				
18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	0	(0.5)	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	0	0.5	(1)	1.5
25. Algae	0	(0.5)	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** Norkett Branch	**Latitude:** 34.892029° N
Evaluator: MLJ	**County:** Union	**Longitude:** 80.362481° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 25.25	**Stream Determination (circle one)** Ephemeral (Intermittent) Perennial	**Other** SCB7-UT1 *e.g. Quad Name:*

A. Geomorphology (Subtotal = 14.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	1	(2)	3
9. Grade control	0	0.5	1	(1.5)
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 6)				
12. Presence of Baseflow	(0)	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	(1.5)	1	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 4.75)				
18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

NC DWQ Stream Identification Form Version 4.11

Date: 8/14/2012	**Project/Site:** Norkett Branch	**Latitude:** 34.885635° N
Evaluator: MLJ	**County:** Union	**Longitude:** 80.366209° W
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 41.5	**Stream Determination (circle one)** Ephemeral Intermittent (Perennial)	**Other** SCP8 - *e.g. Quad Name:* Norkett Branch

A. Geomorphology (Subtotal = 23.5)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	1	2	(3)
6. Depositional bars or benches	0	1	(2)	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	0.5	1	(1.5)
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = 0		Yes = (3)	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 8)				
12. Presence of Baseflow	0	1	2	(3)
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = (3)	

C. Biology (Subtotal = 10)				
18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	(1)	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	0	0.5	1	(1.5)
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	0	0.5	1	(1.5)
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Moderate drought conditions for this area.

Sketch:

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP1 – UT2 to Norkett Branch (Perennial)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 1:00 pm
5. Name of Stream: UT2 to Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 305 acres
8. Stream Order: First
9. Length of Reach Evaluated: 300 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.881565°, W 80.372952°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed ____(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? (YES) NO If yes, estimate the water surface area: 7.5 ac
18. Does channel appear on USGS quad map? (YES) NO 19. Does channel appear on USDA Soil Survey? (YES) NO
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial 70 % Agricultural 30 % Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 8-10 feet
22. Bank Height (from bed to top of bank): 3 feet
23. Channel slope down center of stream: X Flat (0 to 2%) ___Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: X Straight ___Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 34 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

This channel evaluation form is intended to be used only as a guide to assist landowners and environmental professionals in gathering the data required by the United States Army Corps of Engineers in order to make a preliminary assessment of stream quality. The total score resulting from the completion of this form is subject to USACE approval and does not imply a particular mitigation ratio or requirement. Form subject to change – version 05/03. To Comment, please call 919-876-8441 x 26.

STREAM QUALITY ASSESSMENT WORKSHEET
SCP1 – UT2 to Norkett Branch (Perennial)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	2
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	1
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	0
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	1
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	2
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	4
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	3
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	1
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	2
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	2
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	3
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	2
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	3
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	1
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	3
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	2
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	0
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	2
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	0
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	0
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						34

* These characteristics are not assessed in coastal streams.

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP2 – UT2A to Norkett Branch (Intermittent)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 1:30 pm
5. Name of Stream: UT2A to Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 70 acres
8. Stream Order: First
9. Length of Reach Evaluated: 200 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.883736°, W 80.373774°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed ____(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? (YES) NO If yes, estimate the water surface area: 0.5 ac
18. Does channel appear on USGS quad map? YES (NO) 19. Does channel appear on USDA Soil Survey? YES (NO)
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial 97 % Agricultural 3 % Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 4-6 feet
22. Bank Height (from bed to top of bank): 1-2 feet
23. Channel slope down center of stream: X Flat (0 to 2%) ___Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: X Straight ___Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 25 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

This channel evaluation form is intended to be used only as a guide to assist landowners and environmental professionals in gathering the data required by the United States Army Corps of Engineers in order to make a preliminary assessment of stream quality. The total score resulting from the completion of this form is subject to USACE approval and does not imply a particular mitigation ratio or requirement. Form subject to change – version 05/03. To Comment, please call 919-876-8441 x 26.

STREAM QUALITY ASSESSMENT WORKSHEET
SCP2 – UT2A to Norkett Branch (Intermittent)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	1
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	0
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	0
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	1
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	0
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	4
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	4
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	0
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	2
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	2
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	2
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	2
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	3
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	0
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	2
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	1
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	0
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	1
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	0
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	0
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						25

* These characteristics are not assessed in coastal streams.

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP3 – UT2A to Norkett Branch (Perennial)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 1:30 pm
5. Name of Stream: UT2A to Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 70 acres
8. Stream Order: First
9. Length of Reach Evaluated: 100 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.882158°, W 80.372019°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed ____(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? (YES) NO If yes, estimate the water surface area: 0.5 ac
18. Does channel appear on USGS quad map? YES (NO) 19. Does channel appear on USDA Soil Survey? YES (NO)
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial 97 % Agricultural 3 % Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 4-6 feet
22. Bank Height (from bed to top of bank): 1-2 feet
23. Channel slope down center of stream: X Flat (0 to 2%) ___Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: X Straight ___Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 32 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

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STREAM QUALITY ASSESSMENT WORKSHEET
SCP3 – UT2A to Norkett Branch (Perennial)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	2
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	0
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	0
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	1
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	1
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	4
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	4
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	0
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	2
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	3
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	3
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	2
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	3
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	0
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	3
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	2
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	0
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	2
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	0
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	0
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						32

* These characteristics are not assessed in coastal streams.

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP4 – UT3 to Norkett Branch (Intermittent)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 11:00 am
5. Name of Stream: UT3 to Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 28 acres
8. Stream Order: First
9. Length of Reach Evaluated: 100 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.885001°, W 80.365046°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed ____(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? YES (NO) If yes, estimate the water surface area:_____
18. Does channel appear on USGS quad map? YES (NO) 19. Does channel appear on USDA Soil Survey? YES (NO)
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial 34 % Agricultural 66 % Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 3-4 feet
22. Bank Height (from bed to top of bank): 1-2 feet
23. Channel slope down center of stream: X Flat (0 to 2%) ___Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: X Straight ___Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 23 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

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STREAM QUALITY ASSESSMENT WORKSHEET
SCP4 – UT3 to Norkett Branch (Intermittent)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	1
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	0
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	0
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	1
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	0
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	3
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	4
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	0
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	1
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	1
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	2
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	3
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	3
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	0
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	1
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	1
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	0
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	2
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	0
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	0
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						23

* These characteristics are not assessed in coastal streams.

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP5 – Norkett Branch (Perennial)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 9:00 am
5. Name of Stream: Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 1,488 acres
8. Stream Order: Second
9. Length of Reach Evaluated: 200 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.882902°, W 80.367342°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed _V_(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? (YES) NO If yes, estimate the water surface area: ~15 ac
18. Does channel appear on USGS quad map? (YES) NO 19. Does channel appear on USDA Soil Survey? (YES) NO
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial _57_% Agricultural _43_% Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 15-20 feet
22. Bank Height (from bed to top of bank): 4-6 feet
23. Channel slope down center of stream: ___Flat (0 to 2%) _X_Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: ____Straight _X_Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 52 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

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STREAM QUALITY ASSESSMENT WORKSHEET
SCP5 – Norkett Branch (Perennial)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	4
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	2
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	1
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	2
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	4
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	3
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	1
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	2
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	2
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	2
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	4
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	0
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	2
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	2
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	2
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	2
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	3
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	3
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	1
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	4
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	4
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	2
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						52

* These characteristics are not assessed in coastal streams.

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP6 – UT1 to Norkett Branch (Perennial)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 10:00 am
5. Name of Stream: UT1 to Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 47 acres
8. Stream Order: First
9. Length of Reach Evaluated: 200 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.882152°, W 80.364946°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed ____(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? YES (NO) If yes, estimate the water surface area:_____
18. Does channel appear on USGS quad map? YES (NO) 19. Does channel appear on USDA Soil Survey? YES (NO)
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial 90 % Agricultural 10 % Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 8-10 feet
22. Bank Height (from bed to top of bank): 3-4 feet
23. Channel slope down center of stream: ___Flat (0 to 2%) X Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: X Straight ___Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 34 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

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STREAM QUALITY ASSESSMENT WORKSHEET
SCP6 – UT1 to Norkett Branch (Perennial)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	2
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	0
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	1
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	2
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	2
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	1
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	2
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	3
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	1
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	1
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	2
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	2
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	2
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	2
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	2
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	1
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	3
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	2
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	0
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	2
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	1
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	0
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						34

* These characteristics are not assessed in coastal streams.

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP7 – UT1 to Norkett Branch (Intermittent)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 10:15 am
5. Name of Stream: UT1 to Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 47 acres
8. Stream Order: First
9. Length of Reach Evaluated: 100 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.882029°, W 80.362481°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed ____(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? YES (NO) If yes, estimate the water surface area:_____
18. Does channel appear on USGS quad map? YES (NO) 19. Does channel appear on USDA Soil Survey? YES (NO)
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial 90 % Agricultural 10 % Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 8-10 feet
22. Bank Height (from bed to top of bank): 3-4 feet
23. Channel slope down center of stream: ___Flat (0 to 2%) X Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: X Straight ___Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 20 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

This channel evaluation form is intended to be used only as a guide to assist landowners and environmental professionals in gathering the data required by the United States Army Corps of Engineers in order to make a preliminary assessment of stream quality. The total score resulting from the completion of this form is subject to USACE approval and does not imply a particular mitigation ratio or requirement. Form subject to change – version 05/03. To Comment, please call 919-876-8441 x 26.

STREAM QUALITY ASSESSMENT WORKSHEET
SCP7 – UT1 to Norkett Branch (Intermittent)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	1
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	0
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	0
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	2
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	0
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	1
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	1
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	2
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	0
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	1
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	2
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	2
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	2
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	2
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	1
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	0
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	1
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	2
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	0
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	0
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						20

* These characteristics are not assessed in coastal streams.

OFFICE USE ONLY: USACE AID#_____ DWQ #_____

SCP8 – Norkett Branch (Perennial)

STREAM QUALITY ASSESSMENT WORKSHEET

1. Applicant's Name: Wildlands Engineering, Inc.
2. Evaluator's Name: Matt Jenkins
3. Date of Evaluation: 8/14/2012
4. Time of Evaluation: 11:15 am
5. Name of Stream: Norkett Branch
6. River Basin: Yadkin 03040105
7. Approximate Drainage Area: 2,025 acres
8. Stream Order: Third
9. Length of Reach Evaluated: 300 lf
10. County: Union
11. Location of reach under evaluation (include nearby roads and landmarks): From Monroe, NC, travel south on NC Highway 601 for approximately 11 miles and turn left onto Landsford Road. Travel approximately 3 miles to Philadelphia Church Road and turn left. Travel approximately 2 miles; site will be both east and west of Philadelphia Church Road.
12. Site Coordinates (if known): N 34.882902°, W 80.367342°
13. Proposed Channel Work (if any): restoration/enhancement
14. Recent Weather Conditions: no rain within the past 48 hours
15. Site conditions at time of visit: sunny, 90°
16. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters ___ Nutrient Sensitive Waters ___Water Supply Watershed _V_(I-IV)
17. Is there a pond or lake located upstream of the evaluation point? (YES) NO If yes, estimate the water surface area: ~15 ac
18. Does channel appear on USGS quad map? (YES) NO 19. Does channel appear on USDA Soil Survey? (YES) NO
20. Estimated Watershed Land Use: ___% Residential ___% Commercial ___% Industrial _57_% Agricultural _43_% Forested ___% Cleared / Logged ___% Other (_____)
21. Bankfull Width: 20-25 feet
22. Bank Height (from bed to top of bank): 4-6 feet
23. Channel slope down center of stream: _X_Flat (0 to 2%) ___Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
24. Channel Sinuosity: ____Straight _X_Occasional Bends ___Frequent Meander ___Very Sinuous ___Braided Channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 47 **Comments:**_____

Evaluator's Signature_____ **Date** 8/14/2012

This channel evaluation form is intended to be used only as a guide to assist landowners and environmental professionals in gathering the data required by the United States Army Corps of Engineers in order to make a preliminary assessment of stream quality. The total score resulting from the completion of this form is subject to USACE approval and does not imply a particular mitigation ratio or requirement. Form subject to change – version 05/03. To Comment, please call 919-876-8441 x 26.

STREAM QUALITY ASSESSMENT WORKSHEET
SCP8 – Norkett Branch (Perennial)

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	4
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	2
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	1
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	2
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	4
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	4
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	2
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	0
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	2
	10	**Sediment input** (extensive deposition= 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	2
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	3
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	1
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	2
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	1
	15	**Impact by agriculture or livestock production** (substantial impact =0; no evidence = max points)	0 – 5	0 – 4	0 – 5	0
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	2
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	3
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	0
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	2
BIOLOGY	20	**Presence of stream invertebrates** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	2
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	2
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	4
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	2
Total Points Possible			100	100	100	
TOTAL SCORE (also enter on first page)						47

* These characteristics are not assessed in coastal streams.

APPENDIX 4. Resource Agency Correspondence

Categorical Exclusion Form for Ecosystem Enhancement Program Projects
Version 1.4

Note: Only Appendix A should to be submitted (along with any supporting documentation) as the environmental document.

Part 1: General Project Information	
Project Name:	Norkett Branch Stream Mitigation Site
County Name:	Union County
EEP Number:	Contract Number 004673, RFP 16-004110
Project Sponsor:	Wildlands Engineering, Inc.
Project Contact Name:	Andrea Eckardt
Project Contact Address:	1430 S. Mint Street, Suite 104, Charlotte, NC 28203
Project Contact E-mail:	aeckardt@wildlandseng.com
EEP Project Manager:	Paul Wiesner

Project Description

The Norkett Branch Stream Mitigation Site is a stream mitigation project located in western Union County, NC, southeast of the City of Monroe. The project is located on Norkett Branch and five unnamed tributaries. The project will provide stream mitigation units to NCEEP in the Yadkin River Basin (03040105). The mitigation project involves a combination of stream restoration and enhancement.

For Official Use Only

Reviewed By:

9/28/12
Date

Paul Wiesner
EEP Project Manager

Conditional Approved By:

Date

For Division Administrator FHWA

☐ **Check this box if there are outstanding issues**

Final Approval By:

9-27-12
Date

For Division Administrator FHWA

Donnie Brew
Environmental Program Coordinator
FHWA

Part 2: All Projects Regulation/Question	Response
Coastal Zone Management Act (CZMA)	
1. Is the project located in a CAMA county?	☐ Yes ☑ No
2. Does the project involve ground-disturbing activities within a CAMA Area of Environmental Concern (AEC)?	☐ Yes ☐ No ☑ N/A
3. Has a CAMA permit been secured?	☐ Yes ☐ No ☑ N/A
4. Has NCDCM agreed that the project is consistent with the NC Coastal Management Program?	☐ Yes ☐ No ☑ N/A
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)	
1. Is this a "full-delivery" project?	☑ Yes ☐ No
2. Has the zoning/land use of the subject property and adjacent properties ever been designated as commercial or industrial?	☐ Yes ☑ No ☐ N/A
3. As a result of a limited Phase I Site Assessment, are there known or potential hazardous waste sites within or adjacent to the project area?	☐ Yes ☑ No ☐ N/A
4. As a result of a Phase I Site Assessment, are there known or potential hazardous waste sites within or adjacent to the project area?	☐ Yes ☐ No ☑ N/A
5. As a result of a Phase II Site Assessment, are there known or potential hazardous waste sites within the project area?	☐ Yes ☐ No ☑ N/A
6. Is there an approved hazardous mitigation plan?	☐ Yes ☐ No ☑ N/A
National Historic Preservation Act (Section 106)	
1. Are there properties listed on, or eligible for listing on, the National Register of Historic Places in the project area?	☐ Yes ☑ No
2. Does the project affect such properties and does the SHPO/THPO concur?	☐ Yes ☐ No ☑ N/A
3. If the effects are adverse, have they been resolved?	☐ Yes ☐ No ☑ N/A
Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act)	
1. Is this a "full-delivery" project?	☑ Yes ☐ No
2. Does the project require the acquisition of real estate?	☑ Yes ☐ No ☐ N/A
3. Was the property acquisition completed prior to the intent to use federal funds?	☐ Yes ☑ No ☐ N/A
4. Has the owner of the property been informed: * prior to making an offer that the agency does not have condemnation authority; and * what the fair market value is believed to be?	☑ Yes ☐ No ☐ N/A

Part 3: Ground-Disturbing Activities Regulation/Question	Response
American Indian Religious Freedom Act (AIRFA)	
1. Is the project located in a county claimed as "territory" by the Eastern Band of Cherokee Indians?	☐ Yes ☑ No
2. Is the site of religious importance to American Indians?	☐ Yes ☐ No ☑ N/A
3. Is the project listed on, or eligible for listing on, the National Register of Historic Places?	☐ Yes ☐ No ☑ N/A
4. Have the effects of the project on this site been considered?	☐ Yes ☐ No ☑ N/A
Antiquities Act (AA)	
1. Is the project located on Federal lands?	☐ Yes ☑ No
2. Will there be loss or destruction of historic or prehistoric ruins, monuments or objects of antiquity?	☐ Yes ☐ No ☑ N/A
3. Will a permit from the appropriate Federal agency be required?	☐ Yes ☐ No ☑ N/A
4. Has a permit been obtained?	☐ Yes ☐ No ☑ N/A
Archaeological Resources Protection Act (ARPA)	
1. Is the project located on federal or Indian lands (reservation)?	☐ Yes ☑ No
2. Will there be a loss or destruction of archaeological resources?	☐ Yes ☐ No ☑ N/A
3. Will a permit from the appropriate Federal agency be required?	☐ Yes ☐ No ☑ N/A
4. Has a permit been obtained?	☐ Yes ☐ No ☑ N/A
Endangered Species Act (ESA)	
1. Are federal Threatened and Endangered species and/or Designated Critical Habitat listed for the county?	☑ Yes ☐ No
2. Is Designated Critical Habitat or suitable habitat present for listed species?	☐ Yes ☑ No ☐ N/A
3. Are T&E species present or is the project being conducted in Designated Critical Habitat?	☐ Yes ☐ No ☑ N/A
4. Is the project "likely to adversely affect" the species and/or "likely to adversely modify" Designated Critical Habitat?	☐ Yes ☐ No ☑ N/A
5. Does the USFWS/NOAA-Fisheries concur in the effects determination?	☐ Yes ☐ No ☑ N/A
6. Has the USFWS/NOAA-Fisheries rendered a "jeopardy" determination?	☐ Yes ☐ No ☑ N/A

Executive Order 13007 (Indian Sacred Sites)	
1. Is the project located on Federal lands that are within a county claimed as "territory" by the EBCI?	☐ Yes ☑ No
2. Has the EBCI indicated that Indian sacred sites may be impacted by the proposed project?	☐ Yes ☐ No ☑ N/A
3. Have accommodations been made for access to and ceremonial use of Indian sacred sites?	☐ Yes ☐ No ☑ N/A
Farmland Protection Policy Act (FPPA)	
1. Will real estate be acquired?	☑ Yes ☐ No
2. Has NRCS determined that the project contains prime, unique, statewide or locally important farmland?	☑ Yes ☐ No ☐ N/A
3. Has the completed Form AD-1006 been submitted to NRCS?	☑ Yes ☐ No ☐ N/A
Fish and Wildlife Coordination Act (FWCA)	
1. Will the project impound, divert, channel deepen, or otherwise control/modify any water body?	☑ Yes ☐ No
2. Have the USFWS and the NCWRC been consulted?	☑ Yes ☐ No ☐ N/A
Land and Water Conservation Fund Act (Section 6(f))	
1. Will the project require the conversion of such property to a use other than public, outdoor recreation?	☐ Yes ☑ No
2. Has the NPS approved of the conversion?	☐ Yes ☐ No ☑ N/A
Magnuson-Stevens Fishery Conservation and Management Act (Essential Fish Habitat)	
1. Is the project located in an estuarine system?	☐ Yes ☑ No
2. Is suitable habitat present for EFH-protected species?	☐ Yes ☐ No ☑ N/A
3. Is sufficient design information available to make a determination of the effect of the project on EFH?	☐ Yes ☐ No ☑ N/A
4. Will the project adversely affect EFH?	☐ Yes ☐ No ☑ N/A
5. Has consultation with NOAA-Fisheries occurred?	☐ Yes ☐ No ☑ N/A
Migratory Bird Treaty Act (MBTA)	
1. Does the USFWS have any recommendations with the project relative to the MBTA?	☐ Yes ☑ No
2. Have the USFWS recommendations been incorporated?	☐ Yes ☐ No ☑ N/A
Wilderness Act	
1. Is the project in a Wilderness area?	☐ Yes ☑ No
2. Has a special use permit and/or easement been obtained from the maintaining federal agency?	☐ Yes ☐ No ☑ N/A

WILDLANDS
ENGINEERING

July 26, 2012

Renee Gledhill-Earley
State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

Subject: EEP Stream mitigation project in Union County.
Norkett Stream Mitigation Project

Dear Ms. Gledhill-Earley,

The Ecosystem Enhancement Program (EEP) requests review and comment on any possible issues that might emerge with respect to archaeological or cultural resources associated with a potential stream restoration project on the attached site (USGS site map with approximate areas of potential ground disturbance is enclosed).

The Norkett site has been identified for the purpose of providing in-kind mitigation for unavoidable stream channel impacts. Several sections of channel have been identified as significantly degraded. The site has historically been disturbed due to agricultural purposes, specifically for cattle. No architectural structures or archaeological artifacts have been observed or noted during preliminary surveys of the site for restoration purposes.

We ask that you review this site based on the attached information to determine the presence of any historic properties.

We thank you in advance for your timely response and cooperation. Please feel free to contact us with any questions that you may have concerning the extent of site disturbance associated with this project.

Sincerely,

Andrea S. Eckardt

Andrea S. Eckardt
Senior Environmental Planner

1430 South Mint Street, Suite 104 Charlotte, NC 28203 ◦ (P) 704-332-7754 ◦ (F) 704-332-3306

North Carolina Department of Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

August 20, 2012

Andrea Eckardt
Wildlands Engineering
1430 South Mint Street
Suite 104
Charlotte, NC 28203

Re: Norkett Stream Mitigation Project, Union County, ER 12-1359

Dear Ms. Eckardt:

Thank you for your letter of July 26, 2012, concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

Location: 109 East Jones Street, Raleigh NC 27601 **Mailing Address:** 4617 Mail Service Center, Raleigh NC 27699-4617 **Telephone/Fax:** (919) 807-6570/807-6599

WILDLANDS
ENGINEERING

July 26, 2012

Dale Suiter
US Fish and Wildlife Service
Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27636

Subject: **Norkett Stream Mitigation Site**
Union County, North Carolina

Dear Mr. Suiter,

The Norkett Stream Mitigation Site has been identified for the purpose of providing in-kind mitigation for unavoidable stream channel impacts. Several sections of stream channels throughout the site have been identified as significantly degraded as a result of past agricultural activities.

We have already obtained an updated species list for Union County from your web site (http://nc-es.fws.gov/es/countyfr.html). The threatened or endangered species for this county are: the Carolina heelsplitter (*Lasmigona decorate)*, Michaux's sumac (*Rhus michaauxii*), and Schweinitz's sunflower (*Helianthus schweinitzii*). We are requesting that you please provide any known information for each species in the county. The USFWS will be contacted if suitable habitat for any listed species is found or if we determine that the project may affect one or more federally listed species or designated critical habitat.

Please provide comments on any possible issues that might emerge with respect to endangered species, migratory birds or other trust resources from the construction of a stream restoration project on the subject property. A USGS map (Figure 1) showing the approximate property lines and area of potential ground disturbance is enclosed. Figure 1 was prepared from the Pageland, NC 7.5-Minute Topographic Quadrangles.

If we have not heard from you in 30 days we will assume that our species list and site determination are correct, that you do not have any comments regarding associated laws and that you do not have any information relevant to this project at the current time.

We thank you in advance for your timely response and cooperation. Please feel free to contact us with any questions that you may have concerning the extent of site disturbance associated with this project.

Sincerely,

Andrea S. Eckardt

Andrea S. Eckardt
Senior Environmental Planner

Attachment:
Figure 1. USGS Topographic Map

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 8/13/12
Name Of Project Norkett Branch Mitigation Site	Federal Agency Involved FHWA - NCEEP
Proposed Land Use Stream Restoration	County And State Union County, NC
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 8/13/12

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).* Yes ☑ No ☐		Acres Irrigated None	Average Farm Size 156
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 384, 651 % 94	Amount Of Farmland As Defined in FPPA Acres: 291, 581 % 77	
Name Of Land Evaluation System Used Union County LESA	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS 9/10/12	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	29.8			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	29.8	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.0			
B. Total Acres Statewide And Local Important Farmland	29.8			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	41.4			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	86	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use	15	15			
2. Perimeter In Nonurban Use	10	10			
3. Percent Of Site Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	20			
5. Distance From Urban Builtup Area	15	15			
6. Distance To Urban Support Services	15	10			
7. Size Of Present Farm Unit Compared To Average	10	6			
8. Creation Of Nonfarmable Farmland	10	0			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	2			
11. Effects Of Conversion On Farm Support Services	10	0			
12. Compatibility With Existing Agricultural Use	10	0			
TOTAL SITE ASSESSMENT POINTS	160	103	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	86	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	103	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	189	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side)

Form AD-1006 (10-83)

This form was electronically produced by National Production Services Staff

Andrea Eckardt

From: Andrea Eckardt
Sent: Tuesday, September 11, 2012 1:46 PM
To: 'May, Kristin - NRCS, Salisbury, NC'
Subject: RE: AD1006 - Union County - Norkett Branch
Attachments: AD1006 Norkett Final.pdf

Kristen-
Attached is the completed Prime Farmland Request for the Norkett Stream Resotration Project in Union County for your files.

Thanks so much for you help.

Andrea Spangler Eckardt
Wildlands Engineering, Inc.
704-332-7754 ext 101

From: May, Kristin - NRCS, Salisbury, NC [mailto:kristin.may@nc.usda.gov]
Sent: Monday, September 10, 2012 8:42 AM
To: Andrea Eckardt
Cc: Ferguson, Mark - NRCS, Monroe, NC
Subject: RE: AD1006 - Union County - Norkett Branch

Hey Andrea-

Attached is the completed Prime Farmland Request for the Norkett Stream Restoration Project in Union County.

Please let me know if you have any questions.

Thanks

Kristin

Kristin May
Resource Soil Scientist
USDA - NRCS
(704) 637-2400 x 104
(704) 754-6734 cell

From: Andrea Eckardt [mailto:aeckardt@wildlandseng.com]
Sent: Monday, August 13, 2012 2:01 PM
To: May, Kristin - NRCS, Salisbury, NC
Subject: AD1006 - Union County - Norkett Branch

Kristin-
I have another stream restoration project in your area that requires the AD1006 Form, Norkett Branch Mitigation Site. I have attached the form with Parts 1 and 3 filled out. I have also attached a soils map of the site and breakdown of the acreages. Please let me know if you need any additional information from me to complete the form.

BaB - 6 acres

BdB2 - 0.1 acres
CmB - 15.6 acres
ScA - 8.1 acres

As always, thank you for your help.

Andrea

Andrea Spangler Eckardt
Senior Environmental Planner
Wildlands Engineering, Inc.
1430 South Mint Street, Suite 104
Charlotte, NC 28203
704-332-7754 ext 101
www.wildlandseng.com

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service
530 West Innes Street
Salisbury, North Carolina 28144

Kristin May, Resource Soil Scientist
Phone: (704) 637-2400 x 104
E-mail: Kristin.may@nc.usda.gov

September 10, 2012

Wildlands Engineering, Inc.
ATTN: Andrea Spangler Echardt
1430 South Mint Street
Suite 104
Charlotte, NC 28203

Dear Andrea;

The following information is in response to your request for information on Prime, Unique and Statewide Importance Farmlands related to the proposed Norkett Branch Mitigation Site Stream Restoration Project located in Union County.

Projects are subject to the Farmland Protection Policy Act (FPPA) requirements if they irreversibly convert farmland, either directly or indirectly, to a nonagricultural use and are completed or funded by a Federal agency.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA does not have to be currently in crops. It can be forest land, pastureland, cropland, or other land. Farmland does not include land previously converted to urban development or water storage. Urban development is land that has been identified as urbanized area on the Census Bureau Map or as urban-built-up on the USDA Important Farmland Maps.

The area in question meets one or more of the above criteria for Farmland. Enclosed is the Farmland Conversion Impact Rating form (AD1006 / NRCS-CPA-106) with PARTS II, IV and V completed by NRCS.

If you have any questions, please feel free to contact me.

Sincerely,

Kristin J May

Kristin May
Resource Soil Scientist

cc.
Mark Ferguson, District Conservationist, NRCS, Monroe

Projects and Activities Subject to FPPA

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.

Assistance from a Federal agency includes:

- Acquiring or disposing of land.
- Providing financing or loans.
- Managing property.
- Providing technical assistance

Activities that may be subject to FPPA include:

- State highway construction projects, (through the Federal Highway Administration)
- Airport expansions
- Electric cooperative construction projects
- Railroad construction projects
- Telephone company construction projects
- Reservoir and hydroelectric projects
- Federal agency projects that convert farmland
- Other projects completed with Federal assistance.

Activities not subject to FPPA include:

- Federal permitting and licensing
- Projects planned and completed without the assistance of a Federal agency
- Projects on land already in urban development or used for water storage
- Construction within an existing right-of-way purchased on or before August 4, 1984
- Construction for national defense purposes
- Construction of on-farm structures needed for farm operations
- Surface mining, where restoration to agricultural use is planned
- Construction of new minor secondary structures such as a garage or storage shed.

WILDLANDS
ENGINEERING

July 26, 2012

Shannon Deaton
North Carolina Wildlife Resource Commission
Division of Inland Fisheries
1721 Mail Service Center
Raleigh, NC 27699

Subject: **Norkett Stream Mitigation Site**
Union County, North Carolina

Dear Ms. Deaton,

The purpose of this letter is to request review and comment on any possible issues that might emerge with respect to fish and wildlife issues associated with a potential stream restoration project on the attached site. A USGS map (Figure 1) showing the approximate property lines and areas of potential ground disturbance is enclosed. Figure 1 was prepared from the Pageland, NC 7.5-Minute Topographic Quadrangles.

The Norkett Site has been identified for the purpose of providing in-kind mitigation for unavoidable stream channel impacts. Several sections of channel throughout the site have been identified as significantly degraded as a result of past agricultural activities, specifically cattle operations.

We thank you in advance for your timely response and cooperation. Please feel free to contact us with any questions that you may have concerning the extent of site disturbance associated with this project.

Sincerely,

Andrea S. Eckardt

Andrea S. Eckardt
Senior Environmental Planner

Attachment:
Figure 1. USGS Topographic Map

1430 South Mint Street, Suite 104, Charlotte, NC 28203 ◦ (P) 704-332-7754 ◦ (F) 704-332-3306

North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

14 August 2012

Ms. Andrea S. Eckardt
Wildlands Engineering
1430 South Mint Street, Suite 104
Charlotte, NC 28203

Subject: Norkett Stream Mitigation Site, Union County, North Carolina.

Dear Ms. Eckardt:

Biologists with the North Carolina Wildlife Resources Commission have reviewed the subject information. Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667e) and North Carolina General Statutes (G.S. 113-131 et seq.).

The proposed project would provide in-kind mitigation for unavoidable stream impacts. Several sections of channel throughout the site have been identified as significantly degraded from past agricultural activities including cattle operations.

The project site includes Norkett Branch and its unnamed tributaries. Norkett Branch is a tributary to Lanes Creek in the Yadkin-Pee Dee River basin. There are records for the federal species of concern and state endangered Atlantic pigtoe (*Fusconaia masoni*), Savannah lilliput (*Toxolasma pullus*), and Carolina creekshell (*Villosa vaughaniana*); the state threatened creeper (*Strophitus undulatus*); the state special concern Carolina darter (*Etheostoma collis*); and the state significantly rare Eastern creekshell (*Villosa delumbis*) in Lanes Creek. The Significant Natural Heritage Area – Lanes Creek Floodplain – is located downstream of the site.

Stream restoration projects often improve water quality and aquatic habitat. We recommend establishing native, forested buffers in riparian areas to protect water quality, improve terrestrial habitat, and provide a travel corridor for wildlife species. Provided natural channel design methods are used and measures are taken to minimize erosion and sedimentation from construction/restoration activities, we do not anticipate the project to result in significant adverse impacts to aquatic and terrestrial wildlife resources.

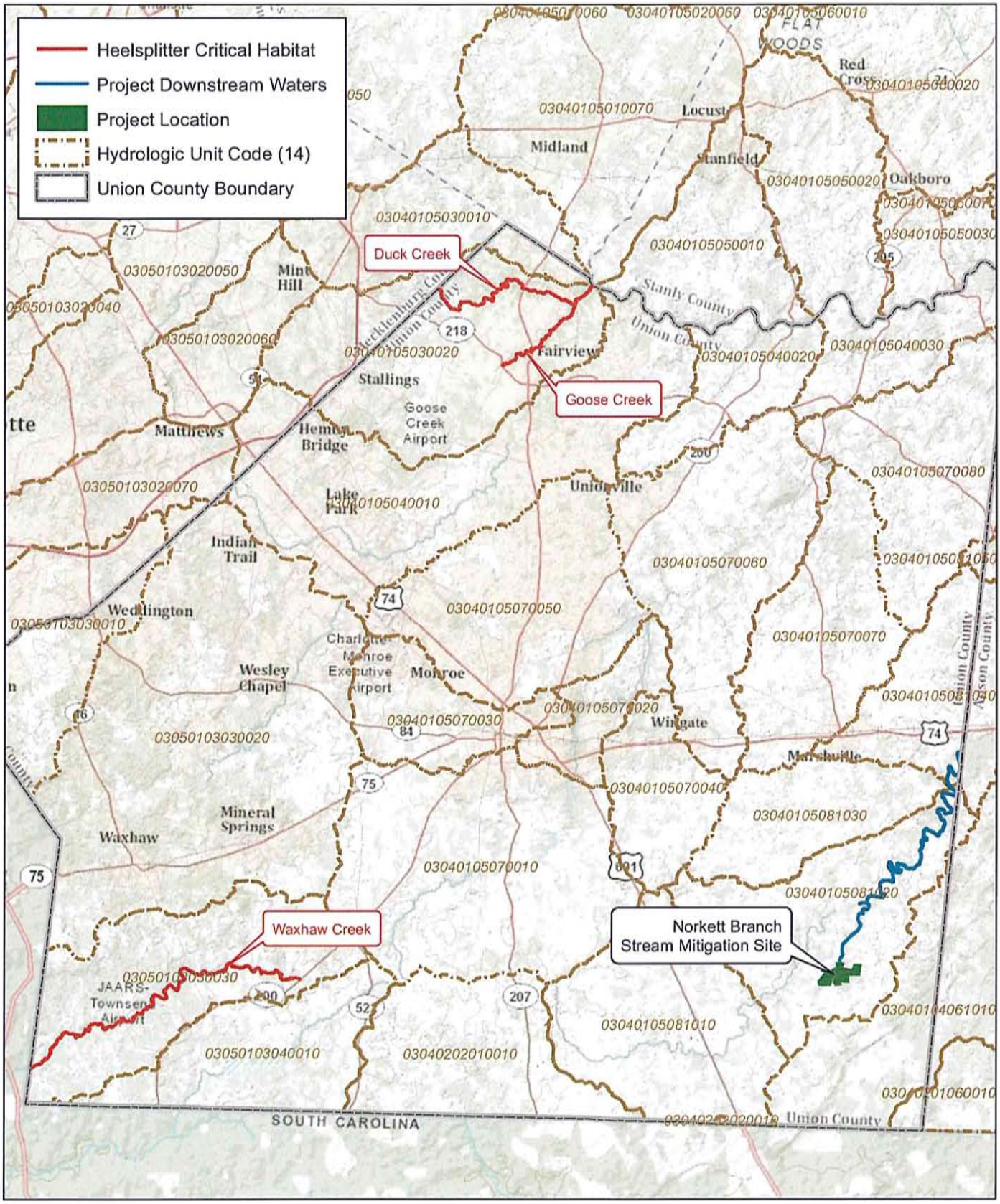
Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

Thank you for the opportunity to review this proposed project. If we can provide further assistance, please contact our office at (336) 449-7625 or shari.bryant@ncwildlife.org.

Sincerely,

Shari L. Bryant
Piedmont Region Coordinator
Habitat Conservation Program

ec: Ryan Heise, NCWRC



WILDLANDS ENGINEERING

Heelsplitter Critical Habitat
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)

Union County, NC

Emily Reinicker

From: Tugwell, Todd SAW <Todd.Tugwell@usace.army.mil>
Sent: Wednesday, April 03, 2013 9:15 AM
To: Emily Reinicker
Cc: John Hutton; Kichefski, Steven L SAW; Wiesner, Paul
Subject: RE: Norkett Branch Stream Mitigation Site (Yadkin 03040105, Union County): proposed BMPs (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Emily,
Yes we discussed Norkett. Much of the discussion involved getting others up to speed on the project, but there was also discussion about the extent of jurisdiction and some IRT members had concerns about maintenance, but in the end we did agree with the proposal you put forward and the credits to be generated. We did make it clear that this was a case-by-case approval and not a method we would necessarily accept on a different project. I've copied John and Steve to see if they have any other comments about our discussion.

Thanks,

Todd Tugwell
Special Projects Manager
Regulatory Division
Wilmington District
U.S. Army Corps of Engineers
11405 Falls of Neuse Road
Wake Forest, NC 27587
(919) 846-2564

We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at: http://per2.nwp.usace.army.mil/survey.html Thank you for taking the time to visit this site and complete the survey.

-----Original Message-----
From: Emily Reinicker [mailto:ereinicker@wildlandseng.com]
Sent: Monday, April 01, 2013 10:56 AM
To: Tugwell, Todd SAW
Subject: RE: Norkett Branch Stream Mitigation Site (Yadkin 03040105, Union County): proposed BMPs (UNCLASSIFIED)

Hi Todd,

I heard this was discussed at the March IRT meeting. Let me know if there are any comments that we can address before submittal of the Mitigation Plan for IRT review. We would appreciate your review and comment by April 5, 2013.

Thanks,
Emily

APPENDIX 5. Historic Aerial Photography

Norkett Mitigation Site
Philadelphia Church Road
Marshville, NC 28103

Inquiry Number: 3372736.5
July 24, 2012

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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Date EDR Searched Historical Sources:

Aerial Photography July 24, 2012

Target Property:

Philadelphia Church Road

Marshville, NC 28103

Year	***Scale***	***Details***	***Source***
1961	Aerial Photograph. Scale: 1"=1000'	Panel #: 34080-H3, Marshville, NC;/Flight Date: July 29, 1961	EDR
1969	Aerial Photograph. Scale: 1"=500'	Panel #: 34080-H3, Marshville, NC;/Flight Date: March 15, 1969	EDR
1976	Aerial Photograph. Scale: 1"=1000'	Panel #: 34080-H3, Marshville, NC;/Flight Date: February 24, 1976	EDR
1983	Aerial Photograph. Scale: 1"=1000'	Panel #: 34080-H3, Marshville, NC;/Flight Date: March 02, 1983	EDR
1989	Aerial Photograph. Scale: 1"=750'	Panel #: 34080-H3, Marshville, NC;/Flight Date: March 11, 1989	EDR
1993	Aerial Photograph. Scale: 1"=500'	Panel #: 34080-H3, Marshville, NC;/Composite DOQQ - acquisition dates: February 03, 1993,February 14, 1993	EDR
1999	Aerial Photograph. Scale: 1"=750'	Panel #: 34080-H3, Marshville, NC;/Flight Date: February 10, 1999	EDR
2005	Aerial Photograph. Scale: 1"=500'	Panel #: 34080-H3, Marshville, NC;/Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Panel #: 34080-H3, Marshville, NC;/Flight Year: 2006	EDR
2008	Aerial Photograph. Scale: 1"=500'	Panel #: 34080-H3, Marshville, NC;/Flight Year: 2008	EDR

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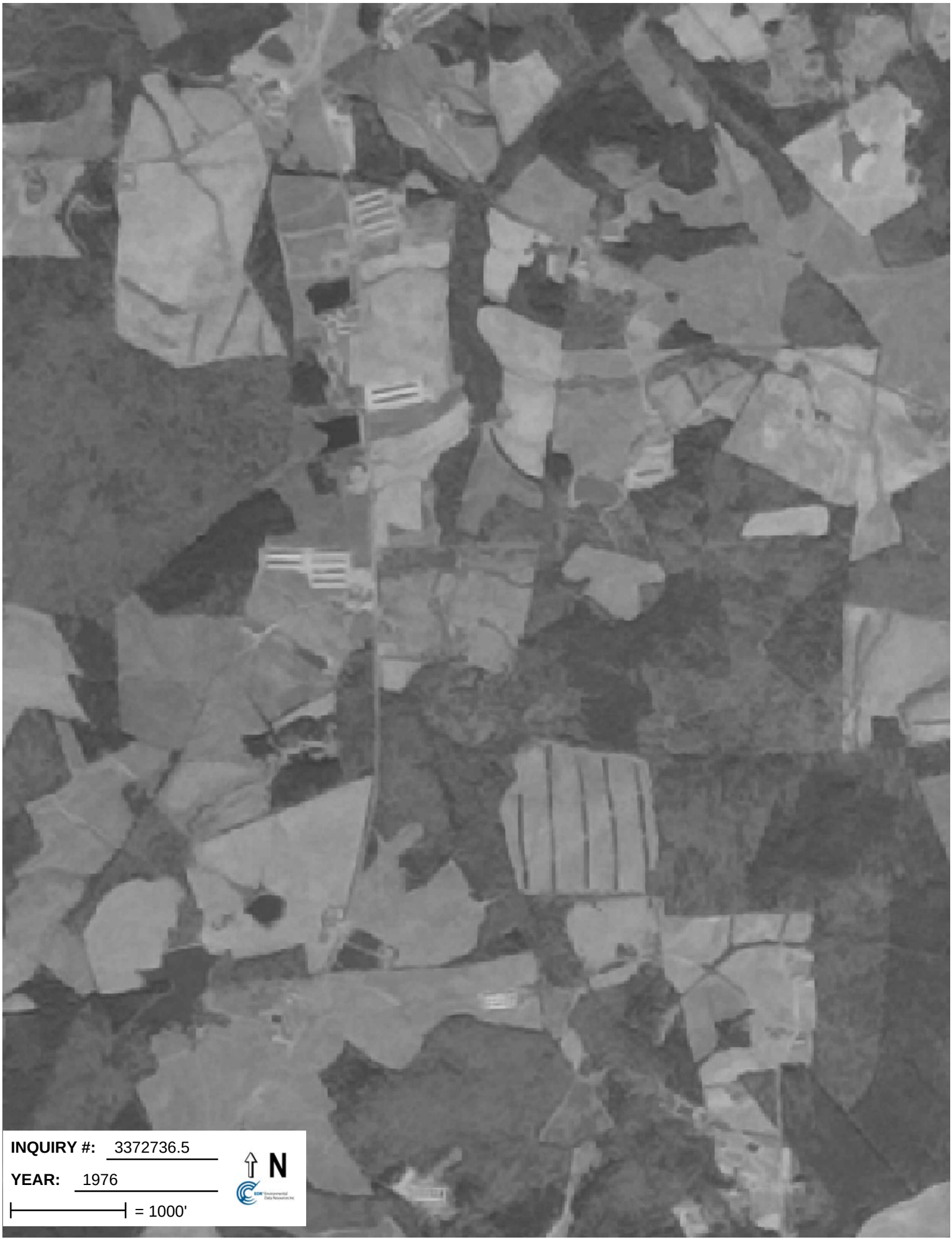
YEAR: 1961
= 1000'
N

INQUIRY #: 3372736.5
YEAR: 1969
= 500'
N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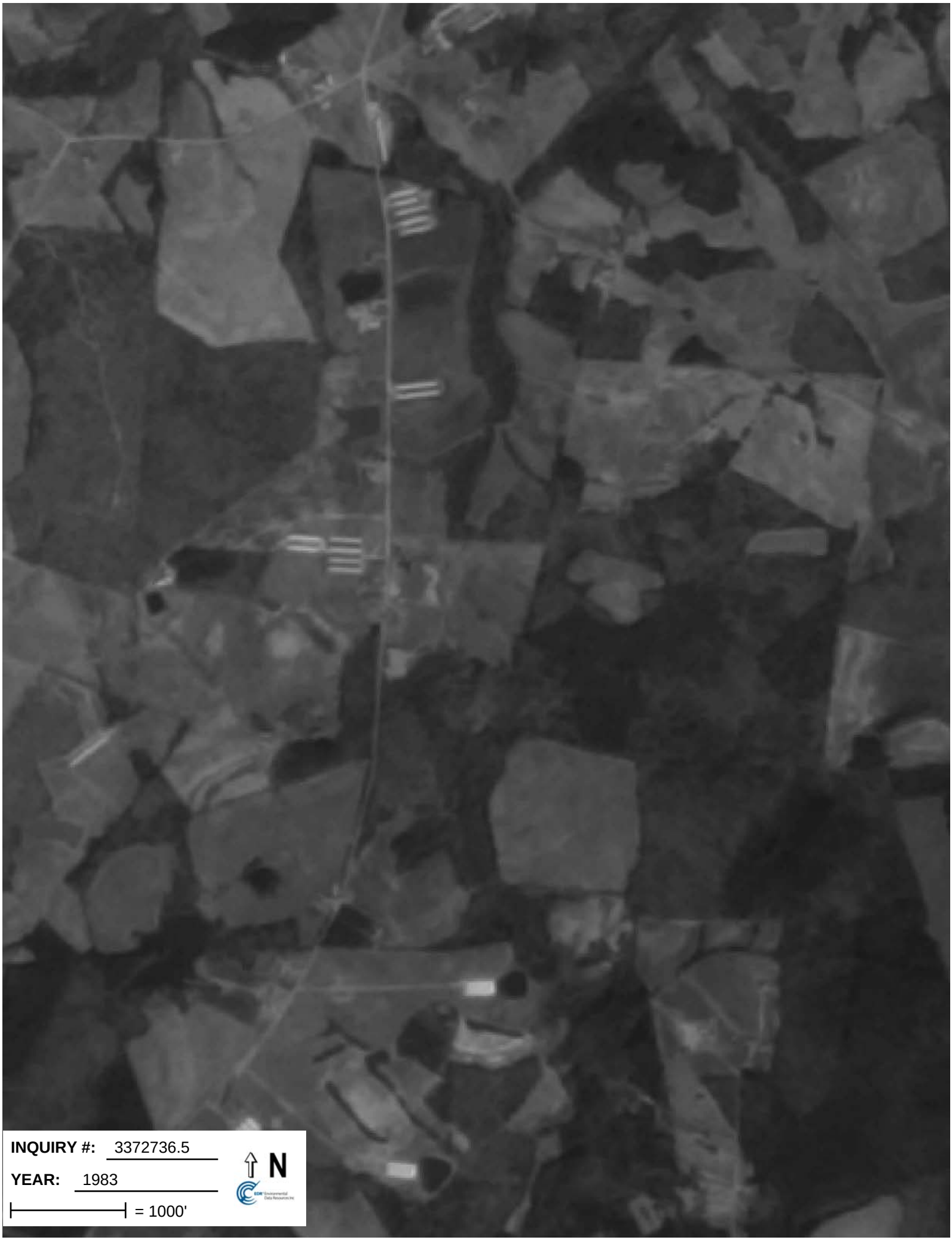

INQUIRY #: 3372736.5
YEAR: 1983
= 1000'
N

INQUIRY #: 3372736.5
YEAR: 1989
= 750'
N

INQUIRY #: 3372736.5
YEAR: 1993
= 500'
N

INQUIRY #: 3372736.5
YEAR: 1999
= 750'
N

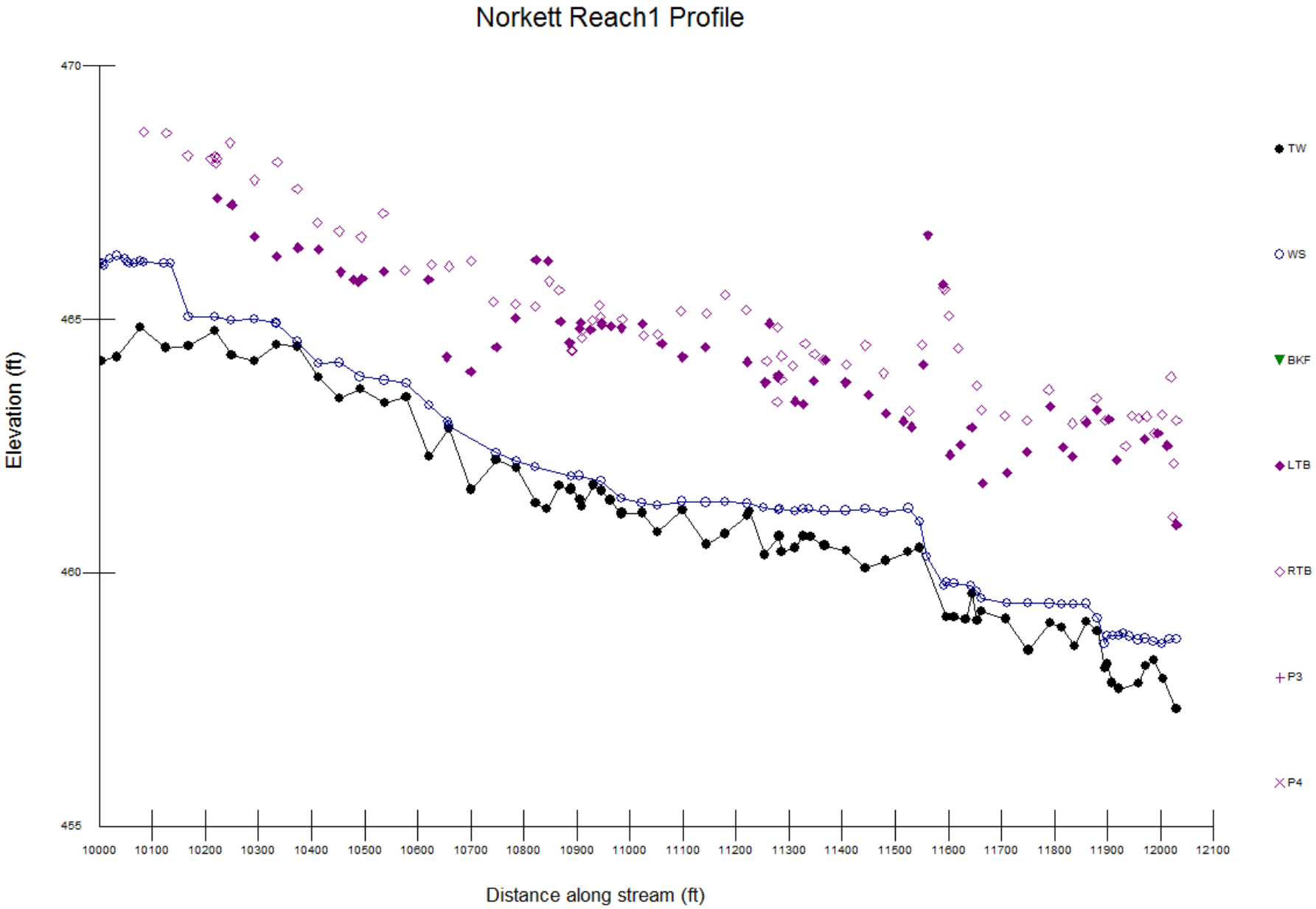
INQUIRY #: 3372736.5
YEAR: 2005
= 500'
N

INQUIRY #: 3372736.5
YEAR: 2006
= 500'
N

INQUIRY #: 3372736.5
YEAR: 2008
= 500'
N

APPENDIX 6. Existing Geomorphic Survey Data

Cross Sections Data
Longitudinal Profile Data
Sediment Data
Reference Reach Data
Dutchman's Creek Gage Analysis
UT2 Pond Model Summary


Norkett Reach1 Profile
Elevation (ft)
470
465
460
455
10000
10100
10200
10300
10400
10500
10600
10700
10800
10900
11000
11100
11200
11300
11400
11500
11600
11700
11800
11900
12000
12100
Distance along stream (ft)
TW
WS
BKF
LTB
RTB
P3
P4

Norkett R1 Profile Report
RIVERMORPH PROFILE SUMMARY

River Name: Norkett
Reach Name: Reach 1
Profile Name: Reach 1-Full (Kee)
Survey Date: 01/25/13

Survey Data

DIST	CH	WS	BKF	LTB	RTB
10000.17		466.131			
10003.15	464.167				
10006.5		466.111			
10009.21		466.061			
10019.55		466.189			
10033.03		466.251			
10033.81	464.258				
10048.63		466.19			
10052.28		466.118			
10057.4		466.113			
10066.9		466.1			
10077.37	464.837				
10077.37		466.153			
10083.22		466.134			
10084.06					468.7
10122.16		466.099			
10126.17	464.435				
10126.37					468.674
10133.56		466.11			
10166.4					468.226
10168.17	464.467				
10168.41		465.045			
10210.27					468.159
10217.45		465.042			
10217.46	464.769				
10217.46					468.208
10218.97					468.071
10222.16					468.179
10222.21				467.386	
10246.01					468.48
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10249.89	464.295				
10249.89				467.261	
10291.81		465.004			
10291.87				466.634	
10292.15					467.746
10292.57	464.179				
10333.19		464.938			
10334.48	464.494				
10334.54				466.238	
10334.55		464.906			
10335.25					468.1
10372.62					467.578
10373.4		464.553			
10373.7	464.463				
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10410.31					466.9

10410.35				466.899
10412.93		464.136		
10413.27	463.852			
10413.27			466.385	
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10452.57		464.14		
10452.63	463.439			
10454.75			465.932	
10479.05			465.779	
10487.02			465.734	
10491.33		463.87		
10492.96	463.63			
10493.22				466.622
10495.28			465.812	
10534.66				467.083
10536.03			465.936	
10537.11		463.8		
10537.58	463.349			
10576.42				465.963
10578.75		463.732		
10578.94	463.459			
10620.28			465.777	
10620.89		463.303		
10621.04	462.297			
10625.49				466.086
10654.22			464.258	
10656.87		462.973		
10658.45	462.84			
10658.8		462.899		
10658.87				466.046
10700			463.974	
10700.47	461.639			
10700.47				466.146
10742.35				465.353
10747.98	462.226			
10747.98			464.454	
10748.09		462.354		
10783.49			465.031	
10784.39				465.305
10786.13		462.195		
10786.58	462.062			
10821.82				465.26
10822.03		462.092		
10822.59	461.376			
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10843.99	461.25			
10845.08			466.15	
10848.27				465.75
10866.24				465.58
10866.7	461.72			
10868.82			464.96	
10886.17			464.546	
10886.39			464.53	
10888.53	461.62			
10889.49				464.39
10889.74		461.903		
10890.06	461.66			
10891.41				464.38
10904.89		461.912		
10904.97			464.818	
10906.17	461.445			
10907.19			464.94	
10909.83				464.627

10909.88				464.78
10909.98	461.31			
10925.68			464.79	
10929.4				464.98
10931.36	461.73			
10942.17				465.28
10945.09				465.05
10945.5		461.803		
10945.79			464.927	
10945.9	461.605			
10946.02	461.63			
10946.76			464.89	
10962.75	461.43			
10963.59			464.87	
10983.27			464.83	
10983.81		461.467		
10984.06	461.158			
10985.3	461.18			
10985.31				465
11022.67		461.376		
11023.09	461.177			
11023.09			464.912	
11025.9				464.687
11051.26		461.337		
11052.36	460.804			
11052.36				464.699
11059.84			464.525	
11095.59				465.171
11098.13		461.409		
11099.2	461.234			
11099.2			464.259	
11141.95			464.451	
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11144.23	460.56			
11144.82	460.541			
11144.82				465.109
11179.69		461.392		
11179.79	460.767			
11179.91				465.491
11219.18				465.18
11220.44	461.124			
11220.44		461.363		
11220.93			464.162	
11224.95	461.21			
11252.4		461.276		
11253.35	460.356			
11254.95			463.752	
11257.37				464.18
11262.77			464.92	
11277.55				463.377
11277.63				464.839
11278.36			463.86	
11279.57			463.909	
11280.03		461.23		
11281.42	460.722			
11282.86		461.259		
11285.6	460.412			
11285.6				463.804
11285.6				464.276
11306.34				464.082
11311.2			463.383	
11311.3		461.216		
11311.9	460.489			

11327.18			463.331	
11327.39	460.721			
11327.39		461.26		
11330.25				464.522
11336.59		461.25		
11340.4	460.71			
11346.25			463.79	
11347.42				464.31
11364.74				464.196
11366.88		461.224		
11367.18	460.535			
11367.85			464.196	
11406.27			463.752	
11407.03		461.224		
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11407.84				464.105
11443.63	460.095			
11443.63		461.251		
11443.63				464.489
11449.9			463.513	
11477.3				463.938
11478.91		461.198		
11482.03	460.236			
11482.03			463.145	
11516.05			462.99	
11523.77	460.41			
11525.37		461.27		
11526.02				463.193
11530.36			462.874	
11545.29		461		
11545.54	460.487			
11549.91				464.496
11552.86			464.113	
11559.23		460.309		
11560.98			466.664	
11589.62				465.622
11589.96			465.689	
11592.33		459.739		
11593.07				465.591
11595.91		459.808		
11597.06	459.117			
11600.94				465.075
11602.88			462.322	
11610.54	459.116			
11610.76		459.784		
11618.03				464.424
11622.9			462.521	
11633.1	459.083			
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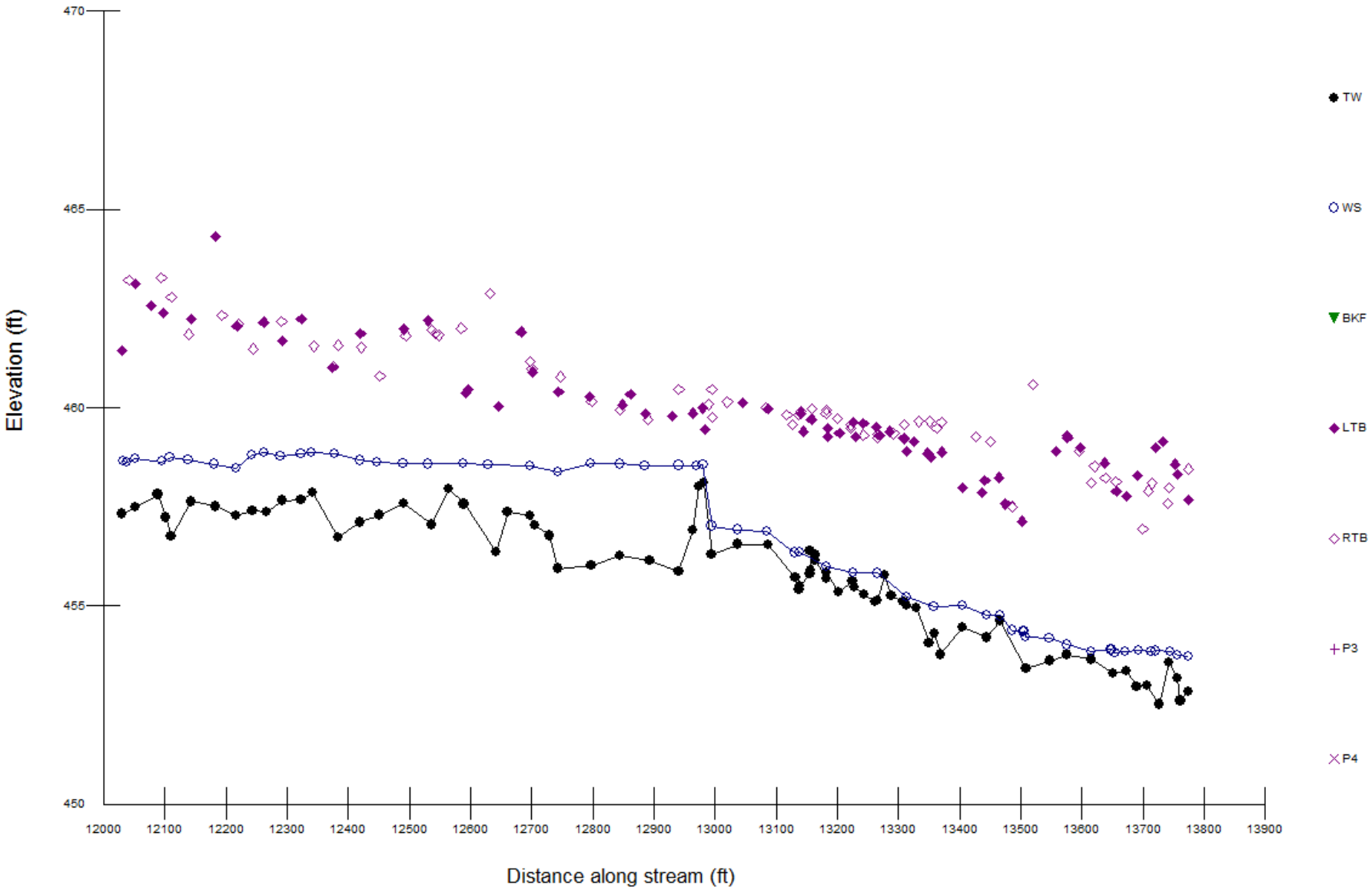
11643.78			462.862	
11644.82	459.576			
11653.01		459.63		
11654.11				463.699
11654.48	459.061			
11661.81		459.5		
11663.01	459.242			
11663.01				463.218
11665.14			461.77	
11706.2				463.091
11708.7	459.089			
11710.15			461.979	
11711.06		459.4		
11747.37				463

11748.73			462.381	
11749.4		459.397		
11751.15	458.468			
11789.12				463.612
11790.45		459.392		
11791.88	459.006			
11791.88			463.272	
11813.37		459.382		
11813.67	458.916			
11815.82			462.472	
11833.99				462.943
11834.33			462.288	
11836.22		459.378		
11838.56	458.546			
11857.45				463.009
11859.32	459.031			
11859.73		459.388		
11860.29			462.959	
11879.12				463.441
11879.25			463.205	
11880.9	458.849			
11881.23		459.1		
11894.47		458.596		
11895.35	458.117			
11895.35				463.002
11899.46	458.199			
11899.81		458.756		
11902.72			463.026	
11908.59	457.828			
11910.31		458.757		
11917.31			462.225	
11921.27	457.711			
11921.27		458.756		
11930.28		458.8		
11933.64				462.504
11940.59		458.743		
11944.94				463.09
11957.57		458.679		
11958.2				463.059
11958.9	457.819			
11969.77			462.64	
11971.09		458.7		
11971.94	458.165			
11973.04				463.084
11985.9		458.64		
11987.32	458.277			
11988.23				462.745
11994.69			462.746	
12002.21				463.119
12003.2		458.6		
12004.36	457.906			
12012.76			462.51	
12017.14		458.691		
12019.28				463.865
12023.15				461.101
12024.73				462.149
12030.13	457.317	458.685	460.947	463.004

Norkett Reach 2 Profile



Norkett R2 Profile Report
RIVERMORPH PROFILE SUMMARY

River Name: Norkett
Reach Name: Reach 2
Profile Name: Reach 2 - Full
Survey Date: 01/25/13

Survey Data

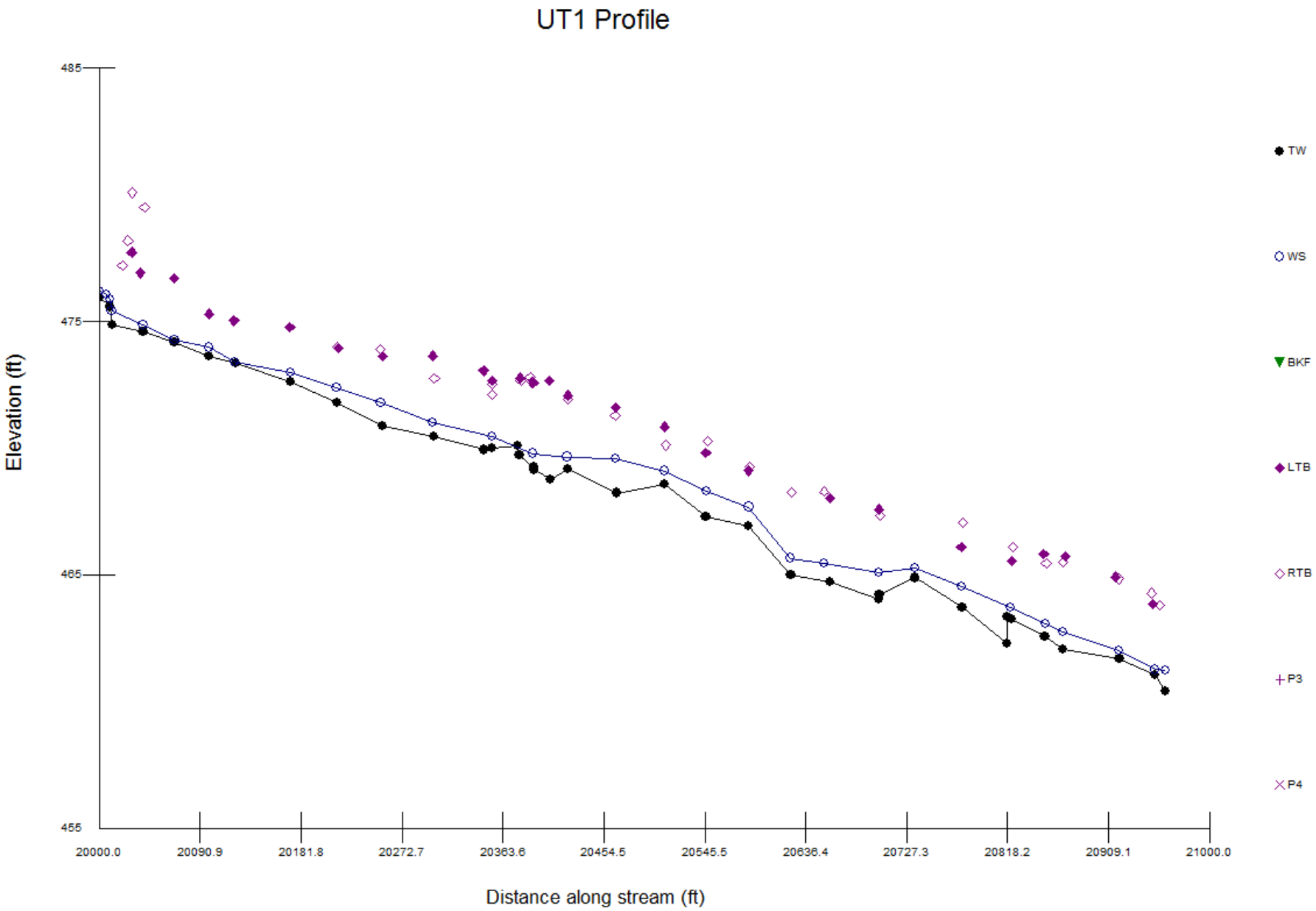
DIST	TW	WS	BKF	LTB	RTB
12030.13	457.317				
12030.47				461.447	
12031.49		458.661			
12037.69		458.634			
12041.39					463.21
12051.68	457.497				
12051.68		458.723			
12051.68				463.122	
12078.23				462.563	
12088.86	457.809				
12094.7					463.272
12094.96		458.64			
12097.69				462.378	
12101.78	457.23				
12108.76		458.733			
12110.63	456.751				
12110.63					462.793
12138.01		458.676			
12138.76					461.85
12142.97	457.629				
12142.97				462.228	
12180.76		458.575			
12182.62	457.51				
12182.62				464.311	
12193.73					462.325
12216.34	457.279				
12217.38		458.462			
12217.95				462.057	
12221.21					462.119
12242.83		458.807			
12243.57	457.385				
12244.6					461.484
12261.74				462.154	
12262.68		458.855			
12265.98	457.359				
12289.24		458.779			
12291.43					462.164
12291.71	457.656				
12291.81				461.691	
12323.31	457.68				
12323.31		458.825			
12323.31				462.224	
12339.33		458.861			
12342.44	457.848				
12343.54					461.544
12374.76				461.012	
12375.96					461.029

12377.16		458.831		
12383.32	456.725			
12383.32				461.574
12418.8	457.109			
12418.92		458.671		
12420.46			461.863	
12420.83				461.519
12447.39		458.62		
12451.56	457.29			
12451.77				460.789
12489.93		458.59		
12490.75	457.575			
12490.9			461.972	
12493.84				461.818
12529.88			462.189	
12530.53		458.578		
12537.05	457.049			
12537.05				461.952
12542.9				461.874
12547.68				461.823
12563.78	457.945			
12585.23				462.004
12588.46		458.582		
12589.21	457.566			
12592.59			460.374	
12596.48			460.468	
12629.26		458.568		
12631.34				462.877
12642.07	456.355			
12645.48			460.018	
12661.06	457.364			
12682.61			461.911	
12685.96				
12697.28	457.286			
12697.28		458.524		
12697.28				461.156
12700.94				460.975
12701.31			460.898	
12705.33	457.024			
12729.4	456.772			
12742.68	455.944			
12743.73		458.376		
12744.15			460.398	
12746.74				460.779
12795.11			460.266	
12796.33		458.583		
12797.85	456.014			
12797.85				460.144
12844.35	456.266			
12844.47		458.577		
12844.85				459.932
12847.86			460.074	
12861.46			460.342	
12885.62		458.534		
12886.58			459.841	
12890.07				459.709
12893.15	456.145			
12930.47			459.784	
12940.58	455.87			
12940.58		458.544		
12940.58				460.462
12964.22	456.907			
12964.22			459.857	

12970.42		458.535		
12973.4	458.005			
12980.04			459.986	
12980.37		458.561		
12981.75	458.11			
12983.32			459.446	
12989.85				460.076
12994.67	456.301			
12994.67		457.014		
12994.67				460.463
12995.88				459.76
13020.32				460.143
13036.74		456.918		
13037.73	456.556			
13044.58			460.119	
13083.25				459.994
13085.6		456.885		
13087.12	456.539			
13087.12			459.964	
13117.36				459.809
13127.36				459.573
13130.44		456.341		
13131.22	455.708			
13136.07				459.83
13137.48	455.4			
13139.02	455.504			
13139.36		456.346		
13139.92			459.86	
13140.06				459.9
13144.1			459.398	
13155.57	455.81			
13155.73	456.39			
13156.91	455.9			
13157.78			459.71	
13158.81				459.97
13163.89	456.28			
13163.97	456.14			
13181.31				459.86
13182.01	455.69			
13182.35				459.93
13182.76		456.001		
13182.89	455.843			
13184.03			459.47	
13184.22			459.259	
13200.17				459.72
13202.57	455.34			
13203.52			459.36	
13221.49				459.49
13222.4				459.558
13225.14	455.61			
13225.76			459.63	
13226.34		455.837		
13227.34	455.474			
13229.25			459.271	
13242.76			459.6	
13243.02				459.31
13243.93	455.28			
13262.54	455.11			
13263.9			459.51	
13265.61		455.825		
13265.84				459.241
13265.93				459.33
13266.18	455.132			

13268.91			459.305	
13277.79	455.78			
13286.14			459.4	
13288.28	455.26			
13292.28				459.34
13308.15	455.1			
13308.59			459.23	
13309.56				459.56
13309.74				459.215
13313.23		455.221		
13313.7			458.893	
13313.92	455.003			
13324.78			459.14	
13328.84	454.94			
13332.75				459.65
13347.87			458.85	
13350.03	454.06			
13351.73				459.65
13353.36			458.736	
13358.25		454.987		
13358.69	454.306			
13362.22				459.488
13369.39	453.77			
13370.26				459.64
13370.52			458.88	
13404.16			457.983	
13404.62		455.009		
13404.96	454.449			
13426.93				459.268
13436.19			457.856	
13441.47			458.171	
13443.97		454.764		
13444.83	454.2			
13450.36				459.142
13463.74			458.24	
13465.79		454.748		
13466.24	454.625			
13475.26			457.568	
13485.61		454.381		
13485.61				457.48
13485.61				457.506
13501.67			457.135	
13503.94		454.354		
13506.28		454.366		
13508.57		454.219		
13509.13	453.417			
13519.36				460.579
13546.94		454.188		
13547.89	453.619			
13557.42			458.903	
13576.3	453.766			
13576.3		454.015		
13576.3			459.3	
13576.63			459.238	
13595.15				458.895
13596.93			458.99	
13614.64				458.106
13615.91		453.85		
13616	453.651			
13620.31				458.518
13637.27			458.604	
13638.61				458.224
13647.07		453.896		

13649.54		453.896		
13650.79	453.305			
13654.25		453.808		
13655.63				458.128
13656.27			457.889	
13670.56		453.856		
13672.34	453.361			
13673.57			457.765	
13689.92	452.949			
13690.67			458.279	
13692.7		453.87		
13699.82				456.933
13705.95	452.994			
13709.2				457.9
13713.97		453.852		
13714.49				458.09
13720.45			458.984	
13720.49		453.863		
13727	452.511			
13732.77			459.133	
13739.79				457.581
13742.12	453.571			
13742.12				457.978
13744.02		453.854		
13752.8			458.572	
13755.98		453.754		
13756.13	453.175			
13756.25			458.307	
13761.41	452.612			
13774.8	452.847	453.719	457.665	458.45


UT1 Profile
Elevation (ft)
485
475
465
455
20000.0
20090.9
20181.8
20272.7
20363.6
20454.5
20545.5
20636.4
20727.3
20818.2
20909.1
21000.0
Distance along stream (ft)
TW
WS
BKF
LTB
RTB
P3
P4

UT1 Profile Report
RIVERMORPH PROFILE SUMMARY

River Name: Norkett
Reach Name: UT1
Profile Name: UT1 Profile
Survey Date: 01/25/13

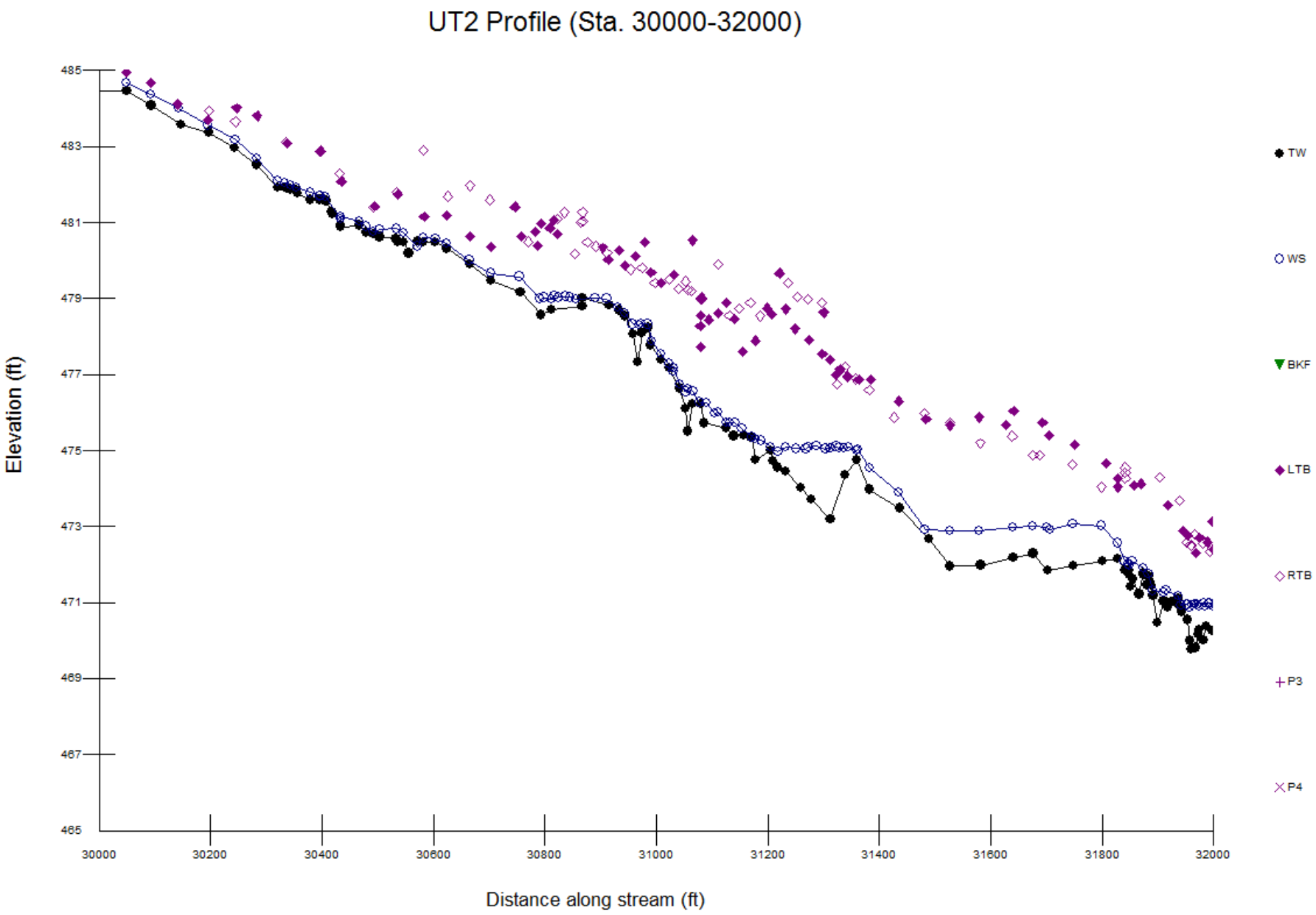
Survey Data

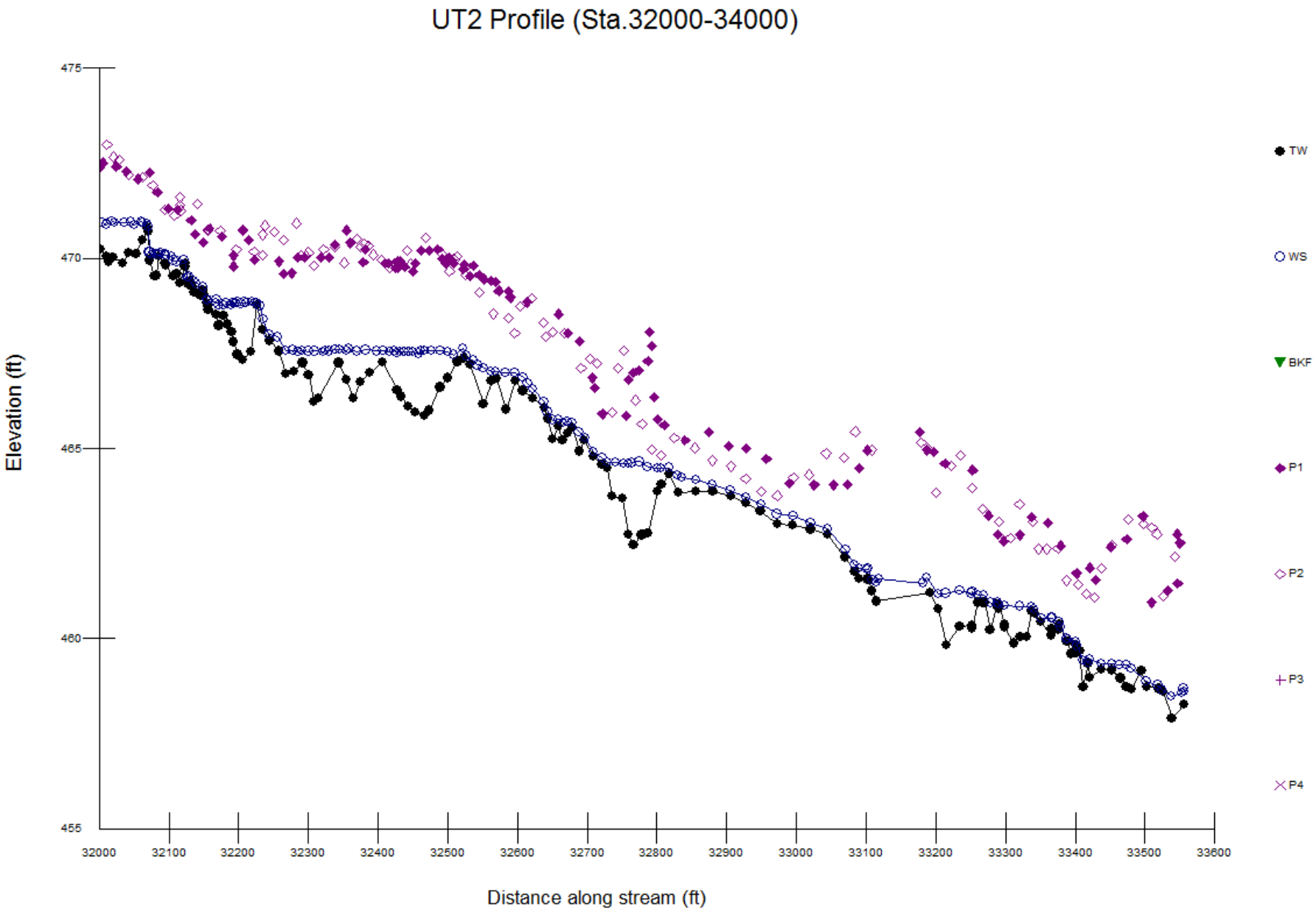
DIST	TW	WS	BKF	LTB	RTB
20000	475.947				
20000.17		476.207			
20006.51		476.051			
20009.43		475.86			
20009.81	475.578				
20011.23		475.412			
20011.68	474.859				
20020.68					477.198
20025.76					478.195
20029.23				477.737	
20029.28					480.078
20037.14				476.913	
20039.42		474.851			
20039.68	474.589				
20040.6					479.506
20067.31				476.693	
20067.8		474.278			
20067.84	474.17				
20098.52	473.62				
20098.57		473.973			
20098.67				475.296	
20121.33				475.023	
20121.49		473.397			
20122.92	473.361				
20171.64				474.774	
20172.05		472.974			
20172.2	472.621				
20213.57		472.379			
20213.96					474.002
20214.63	471.788				
20215.16				473.937	
20252.89					473.912
20253.67		471.795			
20255.04				473.612	
20255.42	470.868				
20300.43				473.647	
20300.51		471.001			
20301.55	470.47				
20301.79					472.747
20346.09				473.06	
20346.26	469.93				
20353.87	470.016				
20354				472.67	
20354.09		470.447			
20354.14					472.53
20354.19					472.101
20376.55	470.09				

20378.32	469.72			
20379.07			472.77	
20379.54				472.67
20388.06				472.79
20389.7				472.596
20390.76		469.789		
20391.08			472.59	
20391.45	469.24			
20391.83	469.15			
20405.55			472.65	
20406.52	468.75			
20421.59		469.644		
20421.79				471.926
20421.82			472.085	
20421.92	469.183			
20464.69				471.276
20464.88		469.597		
20465.26			471.599	
20465.93	468.225			
20509.14		469.1		
20509.37			470.849	
20509.38	468.575			
20510.07				470.113
20546.36			469.803	
20546.6	467.304			
20546.8		468.3		
20548.26				470.282
20584.85			469.112	
20584.88	466.915			
20585.22		467.681		
20585.72				469.256
20622.7		465.659		
20622.83	464.991			
20623.79				468.243
20653.03				468.281
20653.27		465.469		
20658.02	464.711			
20658.07			468.014	
20702.1	464.042			
20702.17		465.088		
20702.43			467.579	
20702.73	464.21			
20703.2				467.322
20734.67		465.256		
20734.78	464.888			
20776.46			466.081	
20776.79		464.545		
20777.39	463.704			
20777.77				467.063
20817.59	462.29			
20817.65	463.35			
20821.11		463.7		
20821.7	463.261			
20821.7			465.54	
20822.88				466.091
20850.79			465.81	
20851.92	462.561			
20852.07		463.058		
20852.91				465.466
20867.7				465.504
20867.89		462.732		
20868.23	462.059			
20870.21			465.722	

UT1 Profile Report

20915.27			464.92	
20918.02				464.839
20918.42		462.024		
20918.97	461.683			
20948.14				464.276
20948.66			463.86	
20951.15	461.04			
20951.15		461.259		
20955.22				463.804
20960.33	460.412	461.23		


UT2 Profile (Sta. 30000-32000)
Elevation (ft)
485
483
481
479
477
475
473
471
469
467
465
30000
30200
30400
30600
30800
31000
31200
31400
31600
31800
32000
Distance along stream (ft)
TW
WS
BKF
LTB
RTB
P3
P4


UT2 Profile (Sta.32000-34000)
Elevation (ft)
475
470
465
460
455
32000
32100
32200
32300
32400
32500
32600
32700
32800
32900
33000
33100
33200
33300
33400
33500
33600
Distance along stream (ft)
TW
WS
BKF
P1
P2
P3
P4

UT2 Profile Report
RIVERMORPH PROFILE SUMMARY

River Name: Norkett
Reach Name: UT2
Profile Name: UT2
Survey Date: 01/25/13

Survey Data

DIST	TW	WS	BKF	LTB	RTB
30000	484.532				
30048.64				484.945	
30049.17		484.663			
30049.42	484.448				
30092.23		484.374			
30092.39				484.659	
30093.31	484.075				
30140.08				484.104	
30142.14		483.997			
30146	483.571				
30194.52				483.691	
30194.53		483.555			
30196.21	483.364				
30196.36					483.93
30243.39	482.954				
30244.12					483.652
30244.21		483.178			
30246.29				484.011	
30282.59		482.673			
30282.87	482.512				
30283.51				483.797	
30320.69	481.91				
30320.94		482.08			
30332.84	481.92				
30332.95		482.03			
30334.17					483.105
30336.22	481.885				
30336.85				483.071	
30343.54		481.98			
30343.7	481.87				
30353.61		481.91			
30353.72	481.84				
30356.21	481.77				
30378.37	481.59				
30378.61		481.78			
30394.98		481.691			
30395.2	481.57				
30395.2					482.866
30396.48	481.61				
30396.82		481.7			
30397.48				482.881	
30406.71		481.67			
30406.92	481.56				
30417.51	481.27				
30417.83	481.23				
30431.46					482.287
30433.6		481.084			

30433.65	480.929			
30433.87	480.87			
30434.01		481.15		
30434.4			482.08	
30466.55		481.03		
30466.91	480.92			
30479.46		480.89		
30479.52	480.74			
30491.53	480.68			
30491.78		480.748		
30492.85				481.406
30493.68			481.42	
30503.2	480.62			
30503.3		480.82		
30532.78	480.57			
30533.2		480.83		
30534.2				481.784
30535.47	480.499			
30535.78			481.743	
30545.86	480.47			
30545.97		480.72		
30555.54	480.19			
30570.85	480.5			
30571		480.37		
30581.63		480.588		
30581.83	480.473			
30581.83				482.89
30582.62			481.154	
30603.1	480.48			
30603.25		480.57		
30623.37		480.437		
30624.1	480.311			
30624.1			481.184	
30626				481.681
30664.31		479.997		
30664.52	479.897			
30664.52				481.967
30665.92			480.637	
30700.18				481.592
30702.46			480.362	
30702.55		479.663		
30702.72	479.463			
30745.84			481.413	
30754.14		479.569		
30756.41	479.159			
30756.72			480.632	
30769.32				480.492
30782.75			480.764	
30786.97			480.388	
30791.38		478.992		
30792.44			480.977	
30792.49	478.565			
30797.83		479.024		
30808.66			480.855	
30811.61	478.711			
30811.61		478.988		
30815.4			481.067	
30816.55		479.073		
30821.87			480.697	
30821.89				481.09
30824.3		479.03		
30834.44				481.261
30837.34		479.053		

30844.87		479.028		
30853.27				480.17
30855.74		478.969		
30865.01				480.992
30867.19	478.8			
30867.19	478.999			
30867.19				481.031
30867.19				481.262
30875.59				480.48
30890.3		479.017		
30890.95				480.372
30903.24			480.338	
30910.76		478.992		
30910.81				480.202
30913.24			480.026	
30914.98	478.817			
30930.07		478.763		
30932.89	478.688			
30932.89			480.254	
30943.62	478.534			
30943.62		478.603		
30943.62			479.87	
30953.11				479.761
30957.13		478.32		
30958.01	478.051			
30962.73			480.106	
30966.62	477.321			
30967.86		478.312		
30972.11		478.342		
30974.01	478.099			
30974.01				479.795
30979.45			480.48	
30984.41		478.323		
30985.88	478.23			
30989.01	477.771			
30990.18			479.682	
30991.02		477.87		
30996.99				479.396
31007.71	477.383			
31007.89		477.545		
31008.34			479.405	
31022.24		477.276		
31022.41				479.509
31022.85	477.17			
31030.19		477.093		
31030.42		477.184		
31031.69			479.63	
31039.3				479.25
31041.07	476.636			
31041.07		476.74		
31052.63	476.093			
31052.69				479.449
31053.52		476.548		
31057.15	475.5			
31057.15		476.624		
31057.15				479.22
31062.69				479.188
31065.35	476.231			
31065.35			480.527	
31065.57		476.553		
31076.86		476.271		
31078.18			478.28	
31079.39	476.216			

31079.39			478.545	
31079.39			477.723	
31080.45			478.99	
31080.55			479.023	
31081.65			478.97	
31084.97	475.718			
31089.61		476.251		
31094.64			478.439	
31104.87		475.977		
31110.17				479.888
31110.39			478.603	
31110.87		476.01		
31125.47	475.592			
31125.47		475.741		
31125.61			478.896	
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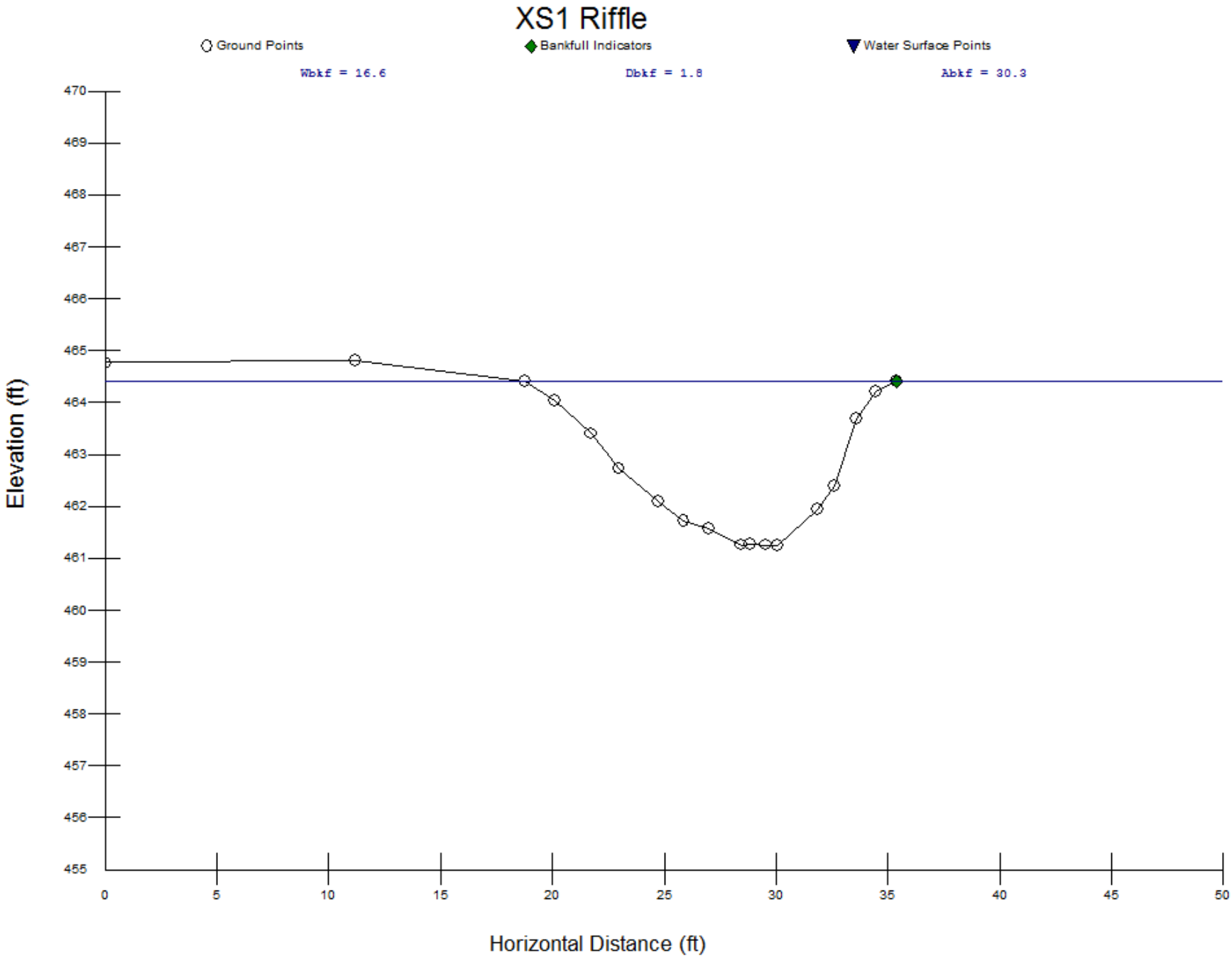
33452.88		459.343		
33453.11	459.171			
33453.11				462.465
33463.71		459.307		
33465.29	458.95			
33473.82	458.726			
33473.82		459.316		
33473.82			462.603	
33476.19				463.132
33480.27		459.224		
33480.87	458.67			
33495.12	459.155			
33497.27			463.211	
33497.3				463.004
33501.73		458.883		
33502.61	458.712			
33509.71			460.947	
33510.26				462.916
33517.29				462.745
33518.95		458.765		
33520.63	458.678			
33525.16		458.65		
33526.92	458.591			
33526.92				461.101
33533.26			461.26	
33538.6		458.474		
33539.22	457.895			
33542.61				462.149
33546.73			462.746	
33546.95			461.447	
33550.4			462.51	
33553.04		458.57		
33555.61		458.685		
33556.97	458.277	458.6		


XS1 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 16.6
Dbkf = 1.8
Abkf = 30.3
Elevation (ft)
470
469
468
467
466
465
464
463
462
461
460
459
458
457
456
455
0
5
10
15
20
25
30
35
40
45
50
Horizontal Distance (ft)

XS1 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 1
Cross Section Name: XS1 Riffle
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	464.77	xs1 riffle
11.21	0	464.81	xs1
18.8	0	464.4	xs1
20.12	0	464.03	xs1
21.73	0	463.4	xs1
22.98	0	462.73	xs1
24.76	0	462.09	xs1
25.87	0	461.72	xs1
27.01	0	461.56	xs1
28.45	0	461.26	xs1
28.87	0	461.27	xs1
29.54	0	461.26	xs1
30.08	0	461.25	xs1
31.84	0	461.95	xs1
32.61	0	462.39	xs1
33.58	0	463.69	xs1
34.48	0	464.22	xs1
35.4	0	464.4	BKF

Cross Sectional Geometry

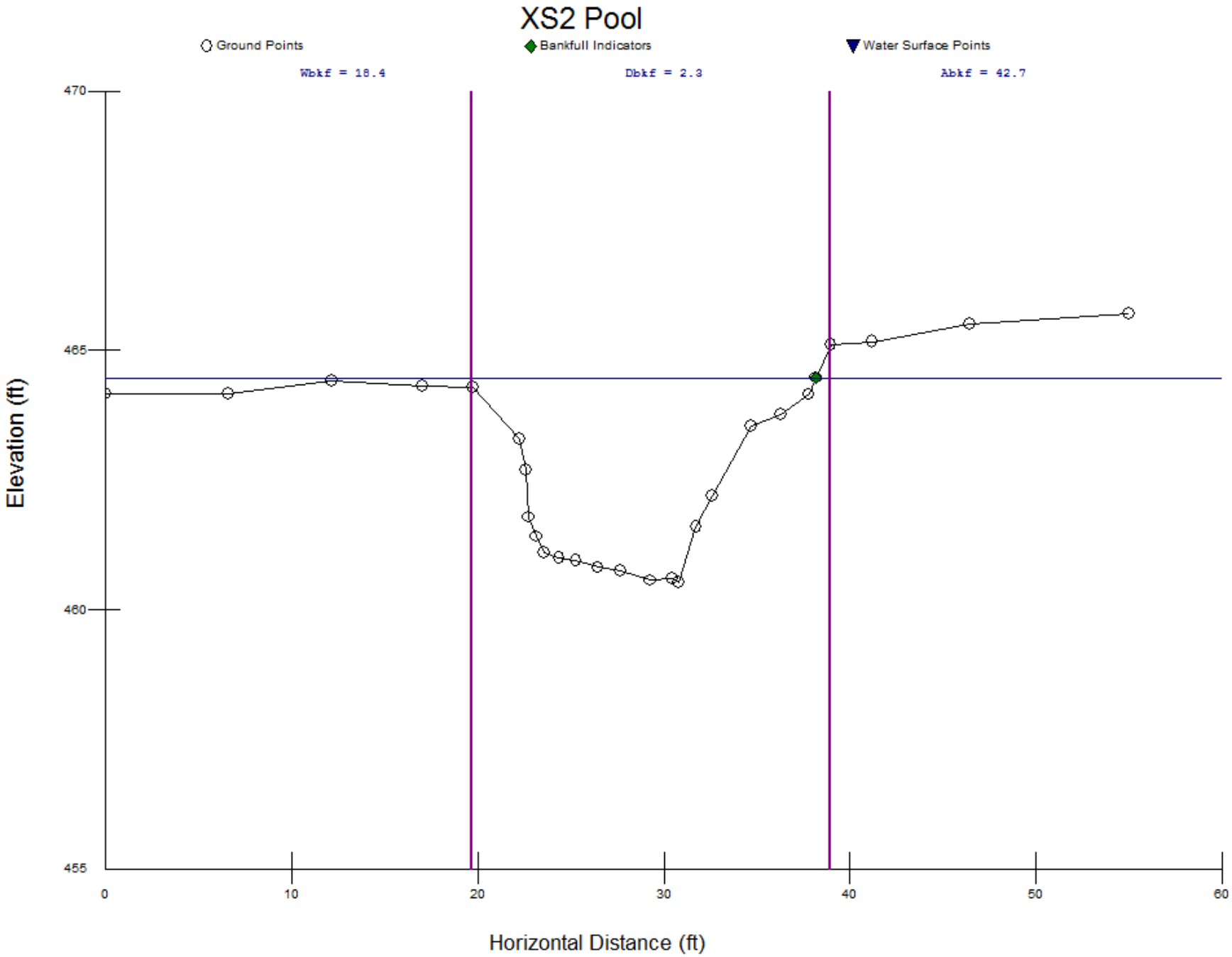
	Channel	Left	Right
Floodprone Elevation (ft)	467.55	467.55	467.55
Bankfull Elevation (ft)	464.4	464.4	464.4
Floodprone Width (ft)	35.4	-----	-----
Bankfull Width (ft)	16.6	9.15	7.45
Entrenchment Ratio	2.13	-----	-----
Mean Depth (ft)	1.83	1.67	2.03
Maximum Depth (ft)	3.15	3.04	3.15
Width/Depth Ratio	9.08	5.5	3.67
Bankfull Area (sq ft)	30.34	15.24	15.11
Wetted Perimeter (ft)	18.22	12.73	11.56
Hydraulic Radius (ft)	1.67	1.2	1.31
Begin BKF Station	18.8	18.8	27.95
End BKF Station	35.4	27.95	35.4

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side

Slope
Shear Stress (lb/sq ft)
Movable Particle (mm)


XS2 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 18.4
Dbkf = 2.3
Abkf = 42.7
470
465
460
455
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

XS2 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 1
Cross Section Name: XS2 Pool
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	464.16	xs2 pool
6.61	0	464.16	xs2
12.17	0	464.42	xs2
17.04	0	464.3	xs2
19.75	0	464.28	xs2 ltb
22.23	0	463.3	xs2
22.59	0	462.69	xs2
22.77	0	461.78	xs2
23.13	0	461.41	xs2
23.55	0	461.09	xs2 ltoe
24.37	0	460.99	xs2
25.28	0	460.94	xs2
26.46	0	460.81	xs2
27.65	0	460.75	xs2
29.25	0	460.56	xs2 twg
30.46	0	460.6	xs2
30.8	0	460.52	xs2 rtoe
31.73	0	461.6	xs2
32.62	0	462.2	xs2
34.68	0	463.53	xs2
36.32	0	463.76	xs2
37.79	0	464.15	xs2
38.15	0	464.47	BKF
38.97	0	465.11	xs2 rtb
41.18	0	465.17	xs2
46.45	0	465.51	xs2
55	0	465.71	xs2

Cross Sectional Geometry

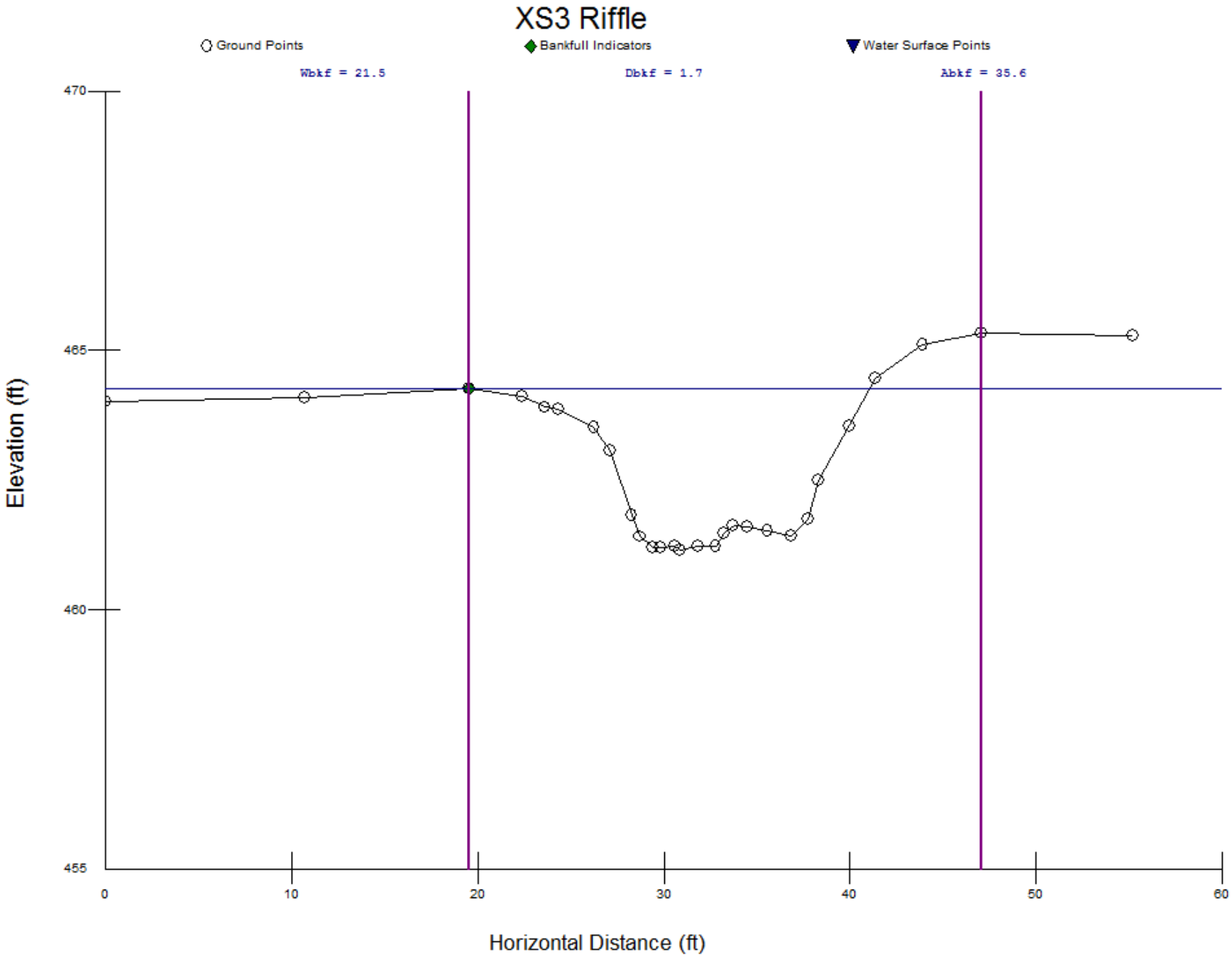
	Channel	Left	Right
Floodprone Elevation (ft)	468.42	468.42	468.42
Bankfull Elevation (ft)	464.47	464.47	464.47
Floodprone Width (ft)	55	-----	-----
Bankfull Width (ft)	18.44	9.24	9.2
Entrenchment Ratio	2.98	-----	-----
Mean Depth (ft)	2.32	2.66	1.97
Maximum Depth (ft)	3.95	3.87	3.95
Width/Depth Ratio	7.96	3.47	4.67
Bankfull Area (sq ft)	42.72	24.59	18.14
Wetted Perimeter (ft)	21.47	14.88	14.35
Hydraulic Radius (ft)	1.99	1.65	1.26
Begin BKF Station	19.71	19.71	28.95

End BKF Station	38.15	28.95	38.15

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS3 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 21.5
Dbkf = 1.7
Abkf = 35.6
470
465
460
455
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

XS3 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 1
Cross Section Name: XS3 Riffle
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	464.01	xs3 riffle
10.74	0	464.09	xs3
19.57	0	464.26	BKF
22.37	0	464.11	xs3 ltb
23.61	0	463.9	xs3
24.32	0	463.86	xs3
26.25	0	463.52	xs3
27.12	0	463.07	xs3
28.27	0	461.83	xs3
28.69	0	461.41	xs3
29.39	0	461.19	xs3 ltoe
29.82	0	461.19	xs3
30.61	0	461.21	xs3 twg
30.86	0	461.15	xs3
31.83	0	461.22	xs3
32.78	0	461.23	xs3
33.21	0	461.48	xs3
33.75	0	461.61	xs3
34.46	0	461.59	xs3
35.56	0	461.52	xs3
36.85	0	461.42	xs3
37.77	0	461.74	xs3 rtoe
38.28	0	462.5	xs3
39.95	0	463.55	xs3
41.36	0	464.46	xs3
43.89	0	465.1	xs3
47.07	0	465.34	xs3 rtb
55.2	0	465.29	xs3

Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	467.37	467.37	467.37
Bankfull Elevation (ft)	464.26	464.26	464.26
Floodprone Width (ft)	55.2	-----	-----
Bankfull Width (ft)	21.48	13.4	8.08
Entrenchment Ratio	2.57	-----	-----
Mean Depth (ft)	1.66	1.41	2.06
Maximum Depth (ft)	3.11	3.11	2.92
Width/Depth Ratio	12.98	9.48	3.93
Bankfull Area (sq ft)	35.56	18.94	16.62
Wetted Perimeter (ft)	23.46	17.27	12.03
Hydraulic Radius (ft)	1.52	1.1	1.38

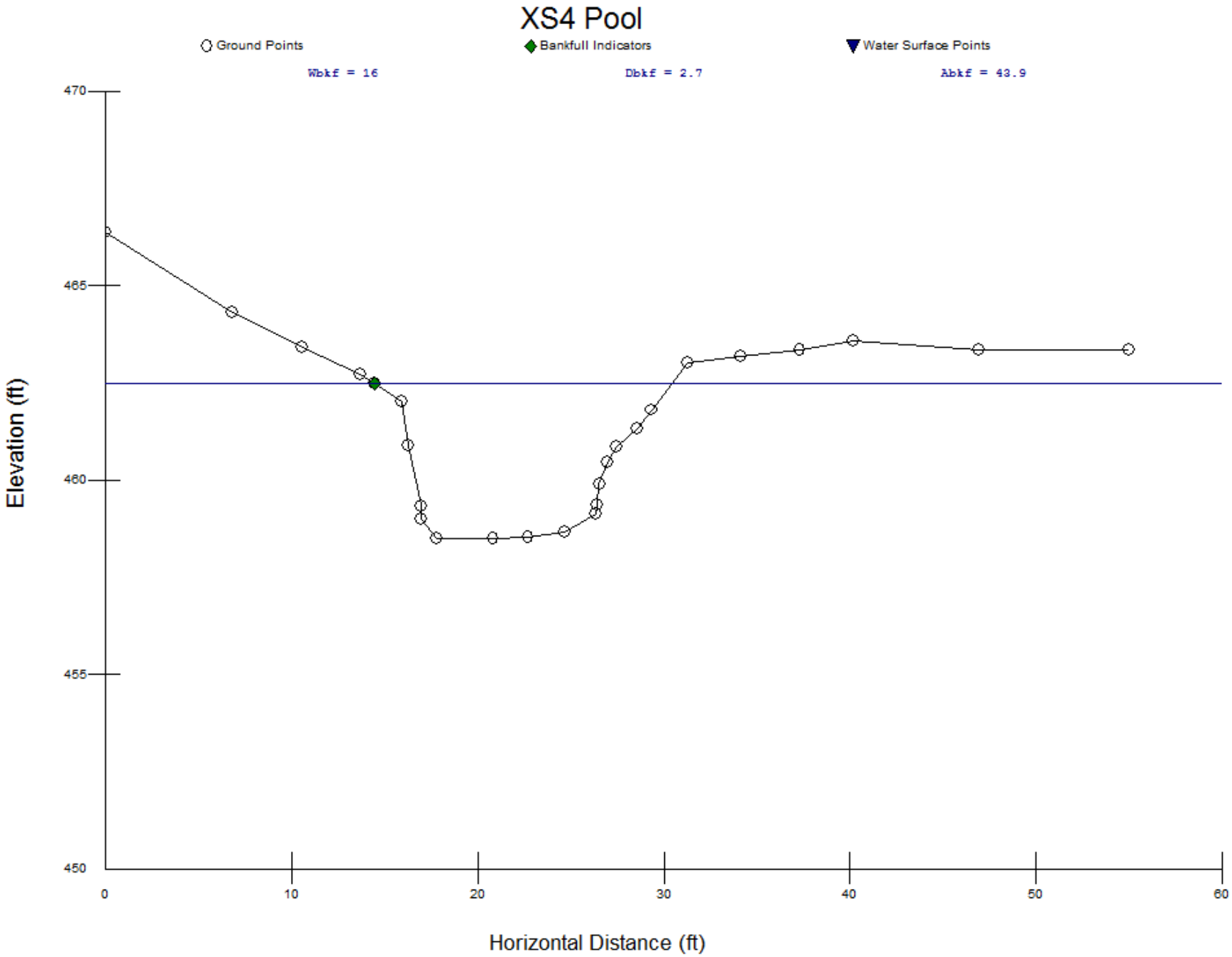
XS3 Riffle Report

Begin BKF Station	19.57	19.57	32.97
End BKF Station	41.05	32.97	41.05

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS4 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 16
Dbkf = 2.7
Abkf = 43.9
470
465
460
455
450
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

XS4 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 1
Cross Section Name: XS4 Pool
Survey Date: 11/02/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	466.38	xs4 pool
6.83	0	464.32	xs4
10.6	0	463.42	xs4
13.72	0	462.7	xs4
14.46	0	462.49	BKF
15.92	0	462.01	xs4 LTB
16.29	0	460.88	xs4
16.95	0	459.34	xs4 LEW
17	0	459	xs4
17.84	0	458.48	xs4
20.83	0	458.5	xs4
22.7	0	458.52	xs4
24.66	0	458.67	xs4
26.38	0	459.13	xs4
26.4	0	459.37	xs4 REW
26.53	0	459.9	xs4
26.99	0	460.45	xs4
27.44	0	460.85	xs4
28.59	0	461.32	xs4
29.35	0	461.8	xs4
31.3	0	463	xs4 RTB
34.15	0	463.19	xs4
37.3	0	463.33	xs4
40.18	0	463.59	xs4
46.91	0	463.35	xs4
55	0	463.35	xs4

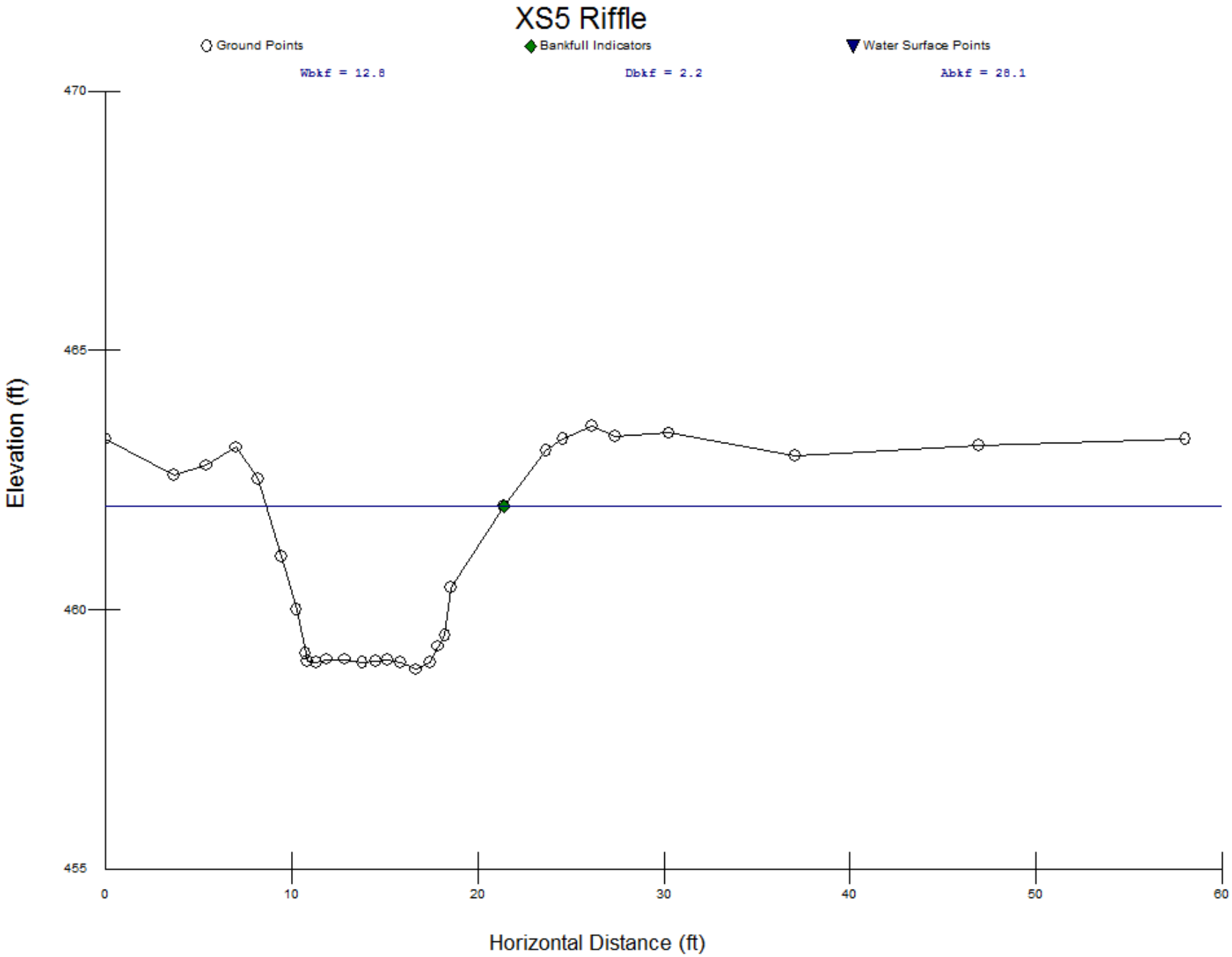
Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	466.5	466.5	466.5
Bankfull Elevation (ft)	462.49	462.49	462.49
Floodprone Width (ft)	55	-----	-----
Bankfull Width (ft)	16.01	7.91	8.1
Entrenchment Ratio	3.44	-----	-----
Mean Depth (ft)	2.74	3	2.49
Maximum Depth (ft)	4.01	4.01	3.97
Width/Depth Ratio	5.84	2.64	3.25
Bankfull Area (sq ft)	43.87	23.72	20.16
Wetted Perimeter (ft)	19.9	14.24	13.61
Hydraulic Radius (ft)	2.2	1.67	1.48
Begin BKF Station	14.46	14.46	22.37
End BKF Station	30.47	22.37	30.47

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS5 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 12.8
Dbkf = 2.2
Abkf = 28.1
470
465
460
455
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

XS5 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 1
Cross Section Name: XS5 Riffle
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	463.28	xs5 RIFFLE
3.71	0	462.6	xs5
5.45	0	462.78	xs5
7.04	0	463.13	xs5 RTB
8.2	0	462.51	xs5
9.45	0	461.03	xs5
10.27	0	460	xs5
10.76	0	459.16	xs5 LEW
10.88	0	459	xs5
11.36	0	458.98	xs5
11.91	0	459.04	xs5
12.9	0	459.04	xs5
13.82	0	458.97	xs5
14.57	0	459.01	xs5
15.17	0	459.02	xs5
15.89	0	458.98	xs5
16.69	0	458.84	xs5
17.44	0	458.99	xs5 REW
17.86	0	459.29	xs5
18.25	0	459.51	xs5
18.6	0	460.43	xs5
21.45	0	462	BKF
23.68	0	463.07	xs5
24.58	0	463.28	xs5
26.17	0	463.53	xs5 RTB
27.42	0	463.33	xs5
30.28	0	463.4	xs5
37.04	0	462.97	xs5
46.91	0	463.16	xs5
58	0	463.29	xs5

Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	465.16	465.16	465.16
Bankfull Elevation (ft)	462	462	462
Floodprone Width (ft)	58	-----	-----
Bankfull Width (ft)	12.82	6.65	6.17
Entrenchment Ratio	4.52	-----	-----
Mean Depth (ft)	2.19	2.45	1.91
Maximum Depth (ft)	3.16	3.03	3.16
Width/Depth Ratio	5.85	2.71	3.23
Bankfull Area (sq ft)	28.08	16.3	11.78

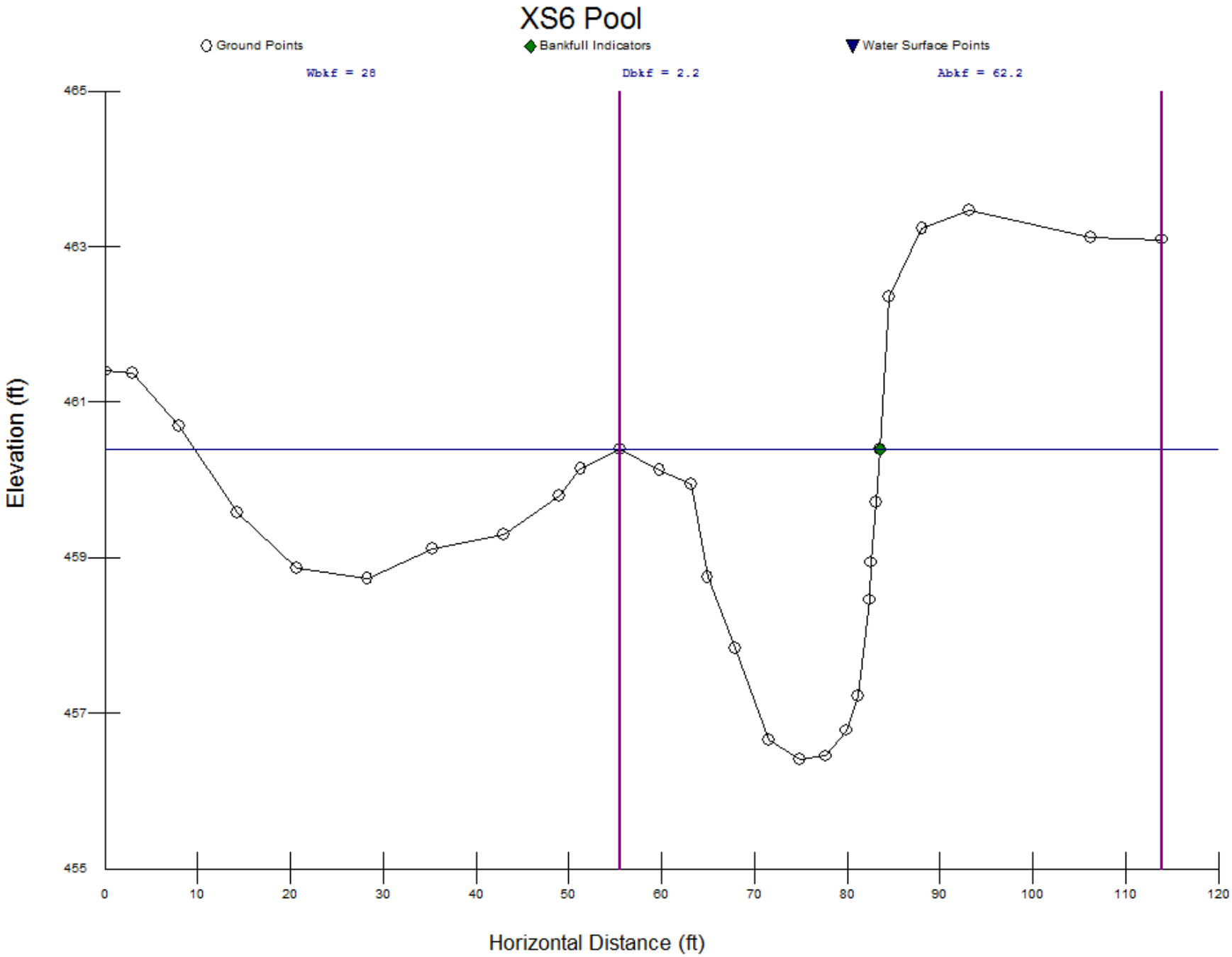
XS5 Riffle Report

Wetted Perimeter (ft)	15.56	11.15	10.38
Hydraulic Radius (ft)	1.81	1.46	1.14
Begin BKF Station	8.63	8.63	15.28
End BKF Station	21.45	15.28	21.45

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS6 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 28
Dbkf = 2.2
Abkf = 62.2
Elevation (ft)
465
463
461
459
457
455
0
10
20
30
40
50
60
70
80
90
100
110
120
Horizontal Distance (ft)

XS6 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 2
Cross Section Name: XS6 Pool
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	461.4	xs6 pool
2.94	0	461.38	xs6
8	0	460.69	xs6
14.21	0	459.58	xs6
20.67	0	458.86	xs6
28.26	0	458.74	xs6
35.36	0	459.11	xs6
43	0	459.3	xs6
48.99	0	459.79	xs6
51.26	0	460.15	xs6
55.53	0	460.4	xs6
59.76	0	460.13	xs6
63.14	0	459.94	xs6-ltob
64.92	0	458.75	xs6-ltoe
67.92	0	457.84	xs6
71.59	0	456.66	xs6
74.85	0	456.41	xs6
77.65	0	456.45	xs6
79.88	0	456.78	xs6
81.12	0	457.22	xs6-rtoe
82.43	0	458.46	xs6
82.5	0	458.94	xs6
83.08	0	459.72	xs6
83.56	0	460.4	BKF
84.48	0	462.35	xs6-tob
88.03	0	463.24	xs6-tob
93.1	0	463.46	xs6
106.2	0	463.12	xs6
113.94	0	463.09	xs6

Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	464.39	464.39	464.39
Bankfull Elevation (ft)	460.4	460.4	460.4
Floodprone Width (ft)	113.94	-----	-----
Bankfull Width (ft)	28	17.71	10.29
Entrenchment Ratio	4.07	-----	-----
Mean Depth (ft)	2.22	1.58	3.33
Maximum Depth (ft)	3.99	3.87	3.99
Width/Depth Ratio	12.61	11.22	3.09
Bankfull Area (sq ft)	62.19	27.95	34.24
Wetted Perimeter (ft)	30.46	22.28	15.92

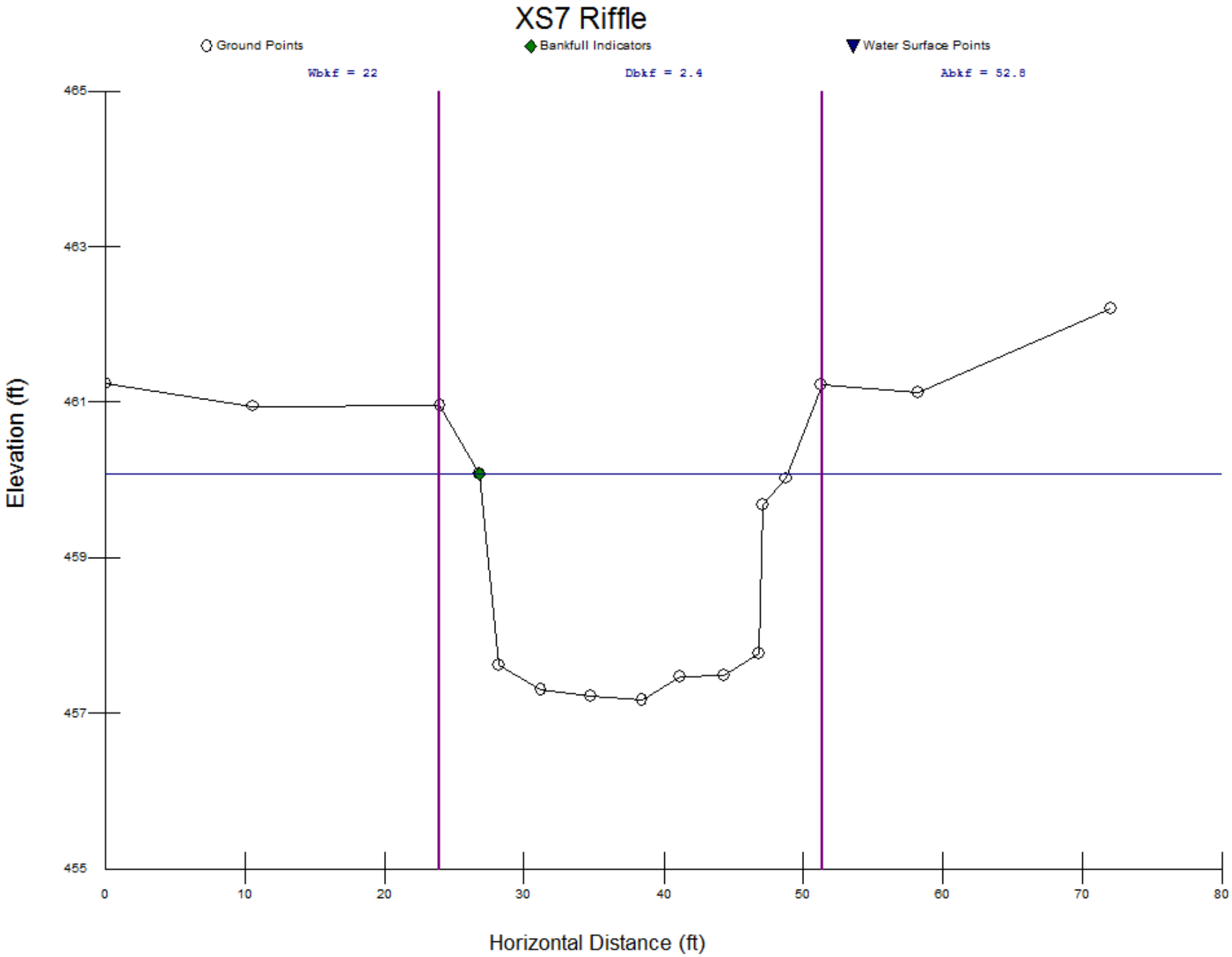
XS6 Pool Report

Hydraulic Radius (ft)	2.04	1.25	2.15
Begin BKF Station	55.56	55.56	73.27
End BKF Station	83.56	73.27	83.56

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS7 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 22
Dbkf = 2.4
Abkf = 52.8
Elevation (ft)
465
463
461
459
457
455
0
10
20
30
40
50
60
70
80
Horizontal Distance (ft)

XS7 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 2
Cross Section Name: XS7 Riffle
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	461.24	xs7-riffle
10.6	0	460.95	xs7
23.97	0	460.96	xs7-ltob
26.83	0	460.08	BKF xs7
28.2	0	457.62	xs7-ltoe
31.2	0	457.31	xs7
34.75	0	457.22	xs7
38.42	0	457.17	xs7
41.2	0	457.47	xs7
44.33	0	457.48	xs7
46.8	0	457.77	xs7-rtoe
47.09	0	459.68	xs7
48.71	0	460.02	xs7
51.3	0	461.22	xs7-rtob
58.23	0	461.13	xs7
72	0	462.21	xs7

Cross Sectional Geometry

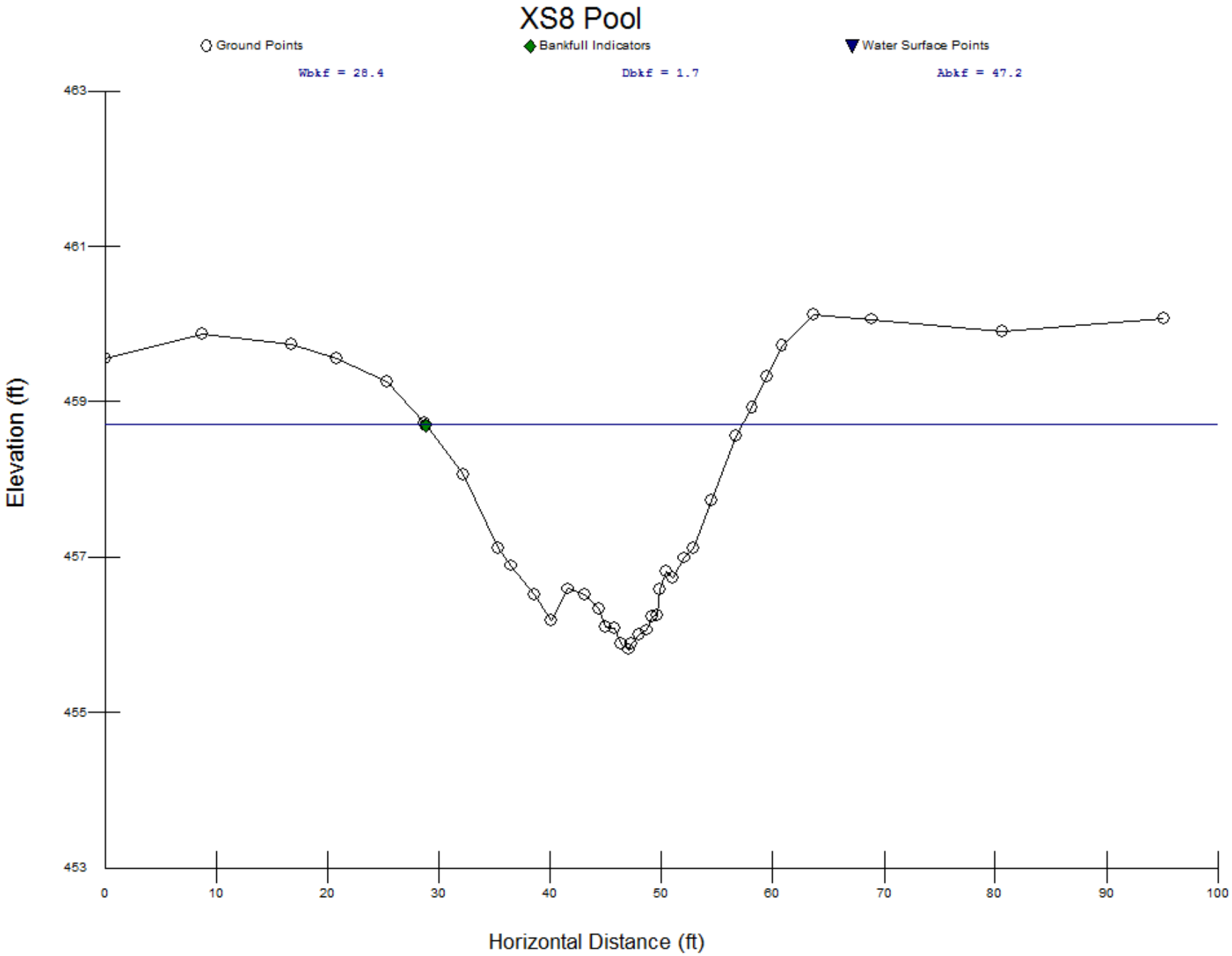
	Channel	Left	Right
Floodprone Elevation (ft)	462.99	462.99	462.99
Bankfull Elevation (ft)	460.08	460.08	460.08
Floodprone Width (ft)	72	-----	-----
Bankfull Width (ft)	22.01	3.66	18.35
Entrenchment Ratio	3.27	-----	-----
Mean Depth (ft)	2.4	2.07	2.46
Maximum Depth (ft)	2.91	2.7	2.91
Width/Depth Ratio	9.18	1.77	7.45
Bankfull Area (sq ft)	52.77	7.59	45.18
Wetted Perimeter (ft)	25.2	7.81	22.77
Hydraulic Radius (ft)	2.09	0.97	1.98
Begin BKF Station	26.83	26.83	30.49
End BKF Station	48.84	30.49	48.84

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			

Movable Particle (mm)


XS8 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 28.4
Dbkf = 1.7
Abkf = 47.2
463
461
459
457
455
453
Elevation (ft)
0
10
20
30
40
50
60
70
80
90
100
Horizontal Distance (ft)

XS8 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 2
Cross Section Name: XS8 Pool
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	459.56	xs8 pool
8.73	0	459.87	xs8
16.78	0	459.74	xs8-ltb
20.86	0	459.56	xs8
25.31	0	459.25	xs8
28.68	0	458.72	xs8
28.85	0	458.7	BKF
32.2	0	458.06	xs8
35.38	0	457.11	xs8
36.49	0	456.89	xs8
38.63	0	456.52	xs8
40.14	0	456.19	xs8
41.62	0	456.59	xs8
43.16	0	456.51	xs8
44.41	0	456.34	xs8
45	0	456.1	xs8-ltoe
45.79	0	456.08	xs8
46.33	0	455.88	xs8
47.05	0	455.81	xs8-twg
47.28	0	455.89	xs8
48.03	0	456	xs8
48.67	0	456.06	xs8
49.21	0	456.24	xs8
49.67	0	456.25	xs8-rtoe
49.82	0	456.58	xs8
50.47	0	456.81	xs8
51.06	0	456.74	xs8
52.03	0	456.99	xs8
52.92	0	457.11	xs8
54.48	0	457.73	xs8
56.66	0	458.56	xs8
58.16	0	458.93	xs8
59.47	0	459.33	xs8
60.84	0	459.72	xs8
63.71	0	460.12	xs8
68.88	0	460.06	xs8-rtb
80.65	0	459.9	xs8
95.16	0	460.07	xs8

Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	461.59	461.59	461.59

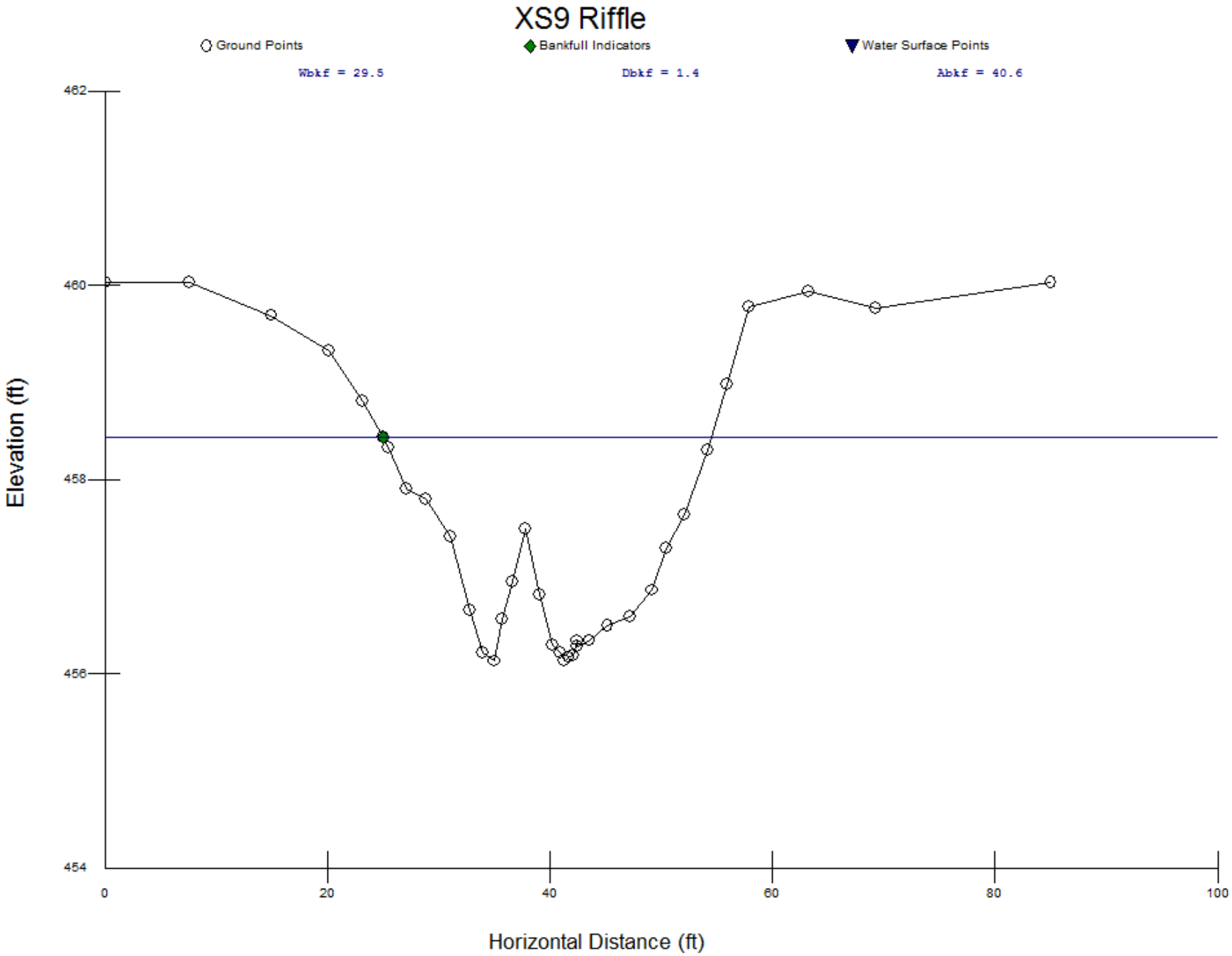
XS8 Pool Report

Bankfull Elevation (ft)	458.7	458.7	458.7
Floodprone Width (ft)	95.16	-----	-----
Bankfull Width (ft)	28.38	14.19	14.19
Entrenchment Ratio	3.35	-----	-----
Mean Depth (ft)	1.66	1.46	1.86
Maximum Depth (ft)	2.89	2.51	2.89
Width/Depth Ratio	17.08	9.69	7.63
Bankfull Area (sq ft)	47.15	20.78	26.37
Wetted Perimeter (ft)	29.46	16.72	17.11
Hydraulic Radius (ft)	1.6	1.24	1.54
Begin BKF Station	28.85	28.85	43.04
End BKF Station	57.23	43.04	57.23

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS9 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 29.5
Dbkf = 1.4
Abkf = 40.6
462
460
458
456
454
Elevation (ft)
0
20
40
60
80
100
Horizontal Distance (ft)

XS9 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: Reach 2
Cross Section Name: XS9 Riffle
Survey Date: 09/04/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	460.03	xs9 riffle
7.6	0	460.03	xs9
14.95	0	459.69	xs9-ltb
20.16	0	459.32	xs9
23.13	0	458.81	xs9
25.01	0	458.43	BKF
25.51	0	458.33	xs9
27.13	0	457.9	xs9
28.81	0	457.8	xs9
31.08	0	457.41	xs9
32.81	0	456.65	xs9
33.94	0	456.22	xs9
34.97	0	456.13	xs9
35.64	0	456.56	xs9
36.65	0	456.95	xs9
37.8	0	457.49	xs9
39.06	0	456.81	xs9
40.2	0	456.3	xs9-ltoe
40.92	0	456.22	xs9
41.32	0	456.14	xs9-twg
41.68	0	456.17	xs9
42.03	0	456.19	xs9
42.4	0	456.34	xs9-wsf
42.42	0	456.28	xs9-rtoe
43.53	0	456.34	xs9
45.14	0	456.49	xs9
47.18	0	456.59	xs9
49.12	0	456.86	xs9
50.41	0	457.29	xs9
52.04	0	457.64	xs9
54.13	0	458.3	xs9
55.87	0	458.98	xs9
57.86	0	459.78	xs9
63.24	0	459.94	xs9-rtb
69.27	0	459.76	xs9
85	0	460.03	xs9

Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	460.73	460.73	460.73
Bankfull Elevation (ft)	458.43	458.43	458.43
Floodprone Width (ft)	85	-----	-----

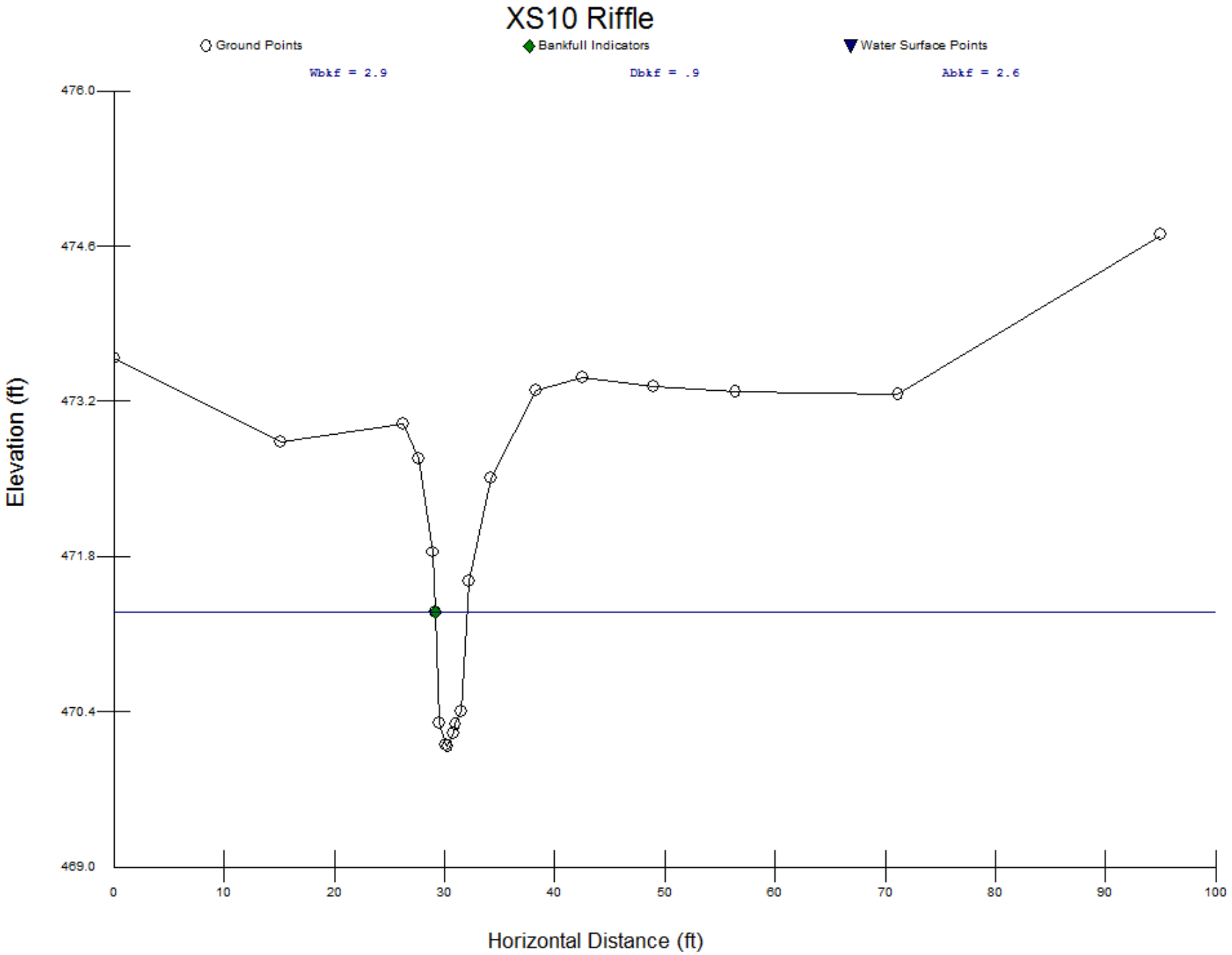
XS9 Riffle Report

Bankfull Width (ft)	29.45	14.52	14.93
Entrenchment Ratio	2.89	-----	-----
Mean Depth (ft)	1.38	1.19	1.56
Maximum Depth (ft)	2.3	2.3	2.29
Width/Depth Ratio	21.37	12.2	9.57
Bankfull Area (sq ft)	40.59	17.29	23.3
Wetted Perimeter (ft)	30.75	17.23	17.17
Hydraulic Radius (ft)	1.32	1	1.36
Begin BKF Station	25.01	25.01	39.53
End BKF Station	54.46	39.53	54.46

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS10 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 2.9
Dbkf = .9
Abkf = 2.6
476.0
474.6
473.2
471.8
470.4
469.0
Elevation (ft)
0
10
20
30
40
50
60
70
80
90
100
Horizontal Distance (ft)

RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT1
Cross Section Name: XS10 Riffle
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	473.59	xs10-riffle
15.11	0	472.83	xs10
26.26	0	473	xs10-ltob
27.65	0	472.68	xs10
28.91	0	471.84	xs10
29.18	0	471.3	BKF
29.52	0	470.3	xs10-ltoe
30.12	0	470.1	xs10
30.29	0	470.09	xs10-twg
30.77	0	470.21	xs10
30.99	0	470.29	xs10
31.55	0	470.4	xs10-rtoe
32.19	0	471.58	xs10
34.2	0	472.51	xs10-rtob
38.31	0	473.3	xs10
42.52	0	473.41	xs10
48.95	0	473.33	xs10
56.41	0	473.29	xs10
71.15	0	473.26	xs10
95	0	474.7	xs10

Cross Sectional Geometry

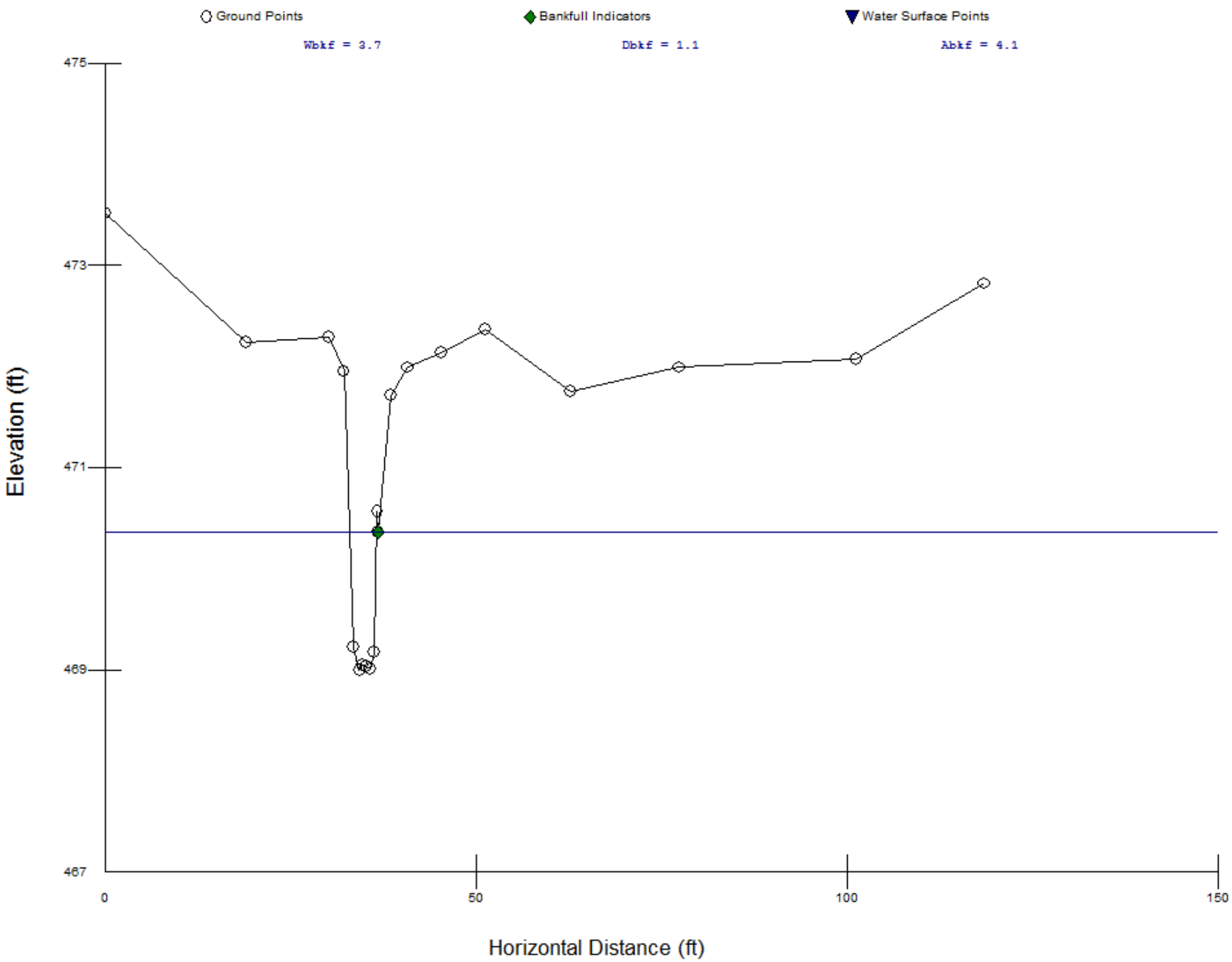
	Channel	Left	Right
Floodprone Elevation (ft)	472.51	472.51	472.51
Bankfull Elevation (ft)	471.3	471.3	471.3
Floodprone Width (ft)	6.3	-----	-----
Bankfull Width (ft)	2.86	1.4	1.46
Entrenchment Ratio	2.2	-----	-----
Mean Depth (ft)	0.9	0.98	0.82
Maximum Depth (ft)	1.21	1.21	1.14
Width/Depth Ratio	3.18	1.43	1.78
Bankfull Area (sq ft)	2.57	1.38	1.2
Wetted Perimeter (ft)	4.18	3.3	3.16
Hydraulic Radius (ft)	0.62	0.42	0.38
Begin BKF Station	29.18	29.18	30.58
End BKF Station	32.04	30.58	32.04

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			

Shear Stress (lb/sq ft)
Movable Particle (mm)


Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 3.7
Dbkf = 1.1
Abkf = 4.1
475
473
471
469
467
Elevation (ft)
0
50
100
150
Horizontal Distance (ft)

RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT1
Cross Section Name: XS11 Pool
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	473.51	xs11-pool
18.91	0	472.24	xs11
30.12	0	472.29	xs11
32.15	0	471.95	xs11-ltob
33.47	0	469.23	xs11-ltoe
34.23	0	469	xs11
34.72	0	469.05	xs11-twg
35.23	0	469.03	xs11
35.77	0	469.01	xs11
36.24	0	469.17	xs11-rtoe
36.66	0	470.57	xs11
36.69	0	470.36	BKF
38.51	0	471.72	xs11-rtob
40.79	0	471.99	xs11
45.35	0	472.14	xs11
51.22	0	472.36	xs11
62.78	0	471.75	xs11
77.32	0	471.99	xs11
101.16	0	472.07	xs11
118.55	0	472.82	xs11

Cross Sectional Geometry

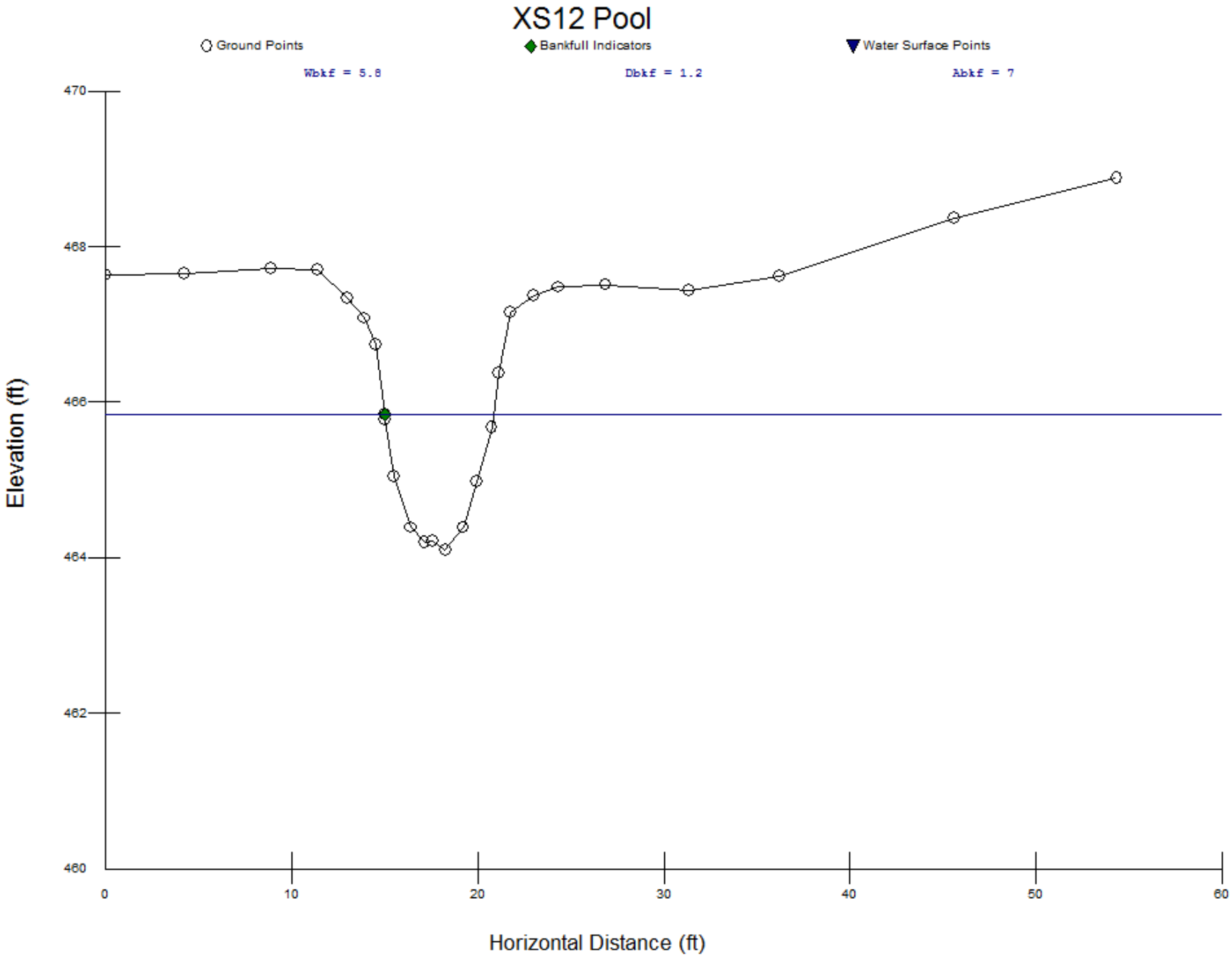
	Channel	Left	Right
Floodprone Elevation (ft)	471.72	471.72	471.72
Bankfull Elevation (ft)	470.36	470.36	470.36
Floodprone Width (ft)	6.25	-----	-----
Bankfull Width (ft)	3.68	1.84	1.84
Entrenchment Ratio	1.7	-----	-----
Mean Depth (ft)	1.12	1.07	1.17
Maximum Depth (ft)	1.36	1.36	1.35
Width/Depth Ratio	3.28	1.72	1.57
Bankfull Area (sq ft)	4.12	1.96	2.15
Wetted Perimeter (ft)	5.33	3.89	4.06
Hydraulic Radius (ft)	0.77	0.5	0.53
Begin BKF Station	32.92	32.92	34.76
End BKF Station	36.6	34.76	36.6

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			

Shear Stress (lb/sq ft)
Movable Particle (mm)


XS12 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 5.8
Dbkf = 1.2
Abkf = 7
470
468
466
464
462
460
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT1
Cross Section Name: XS12 Pool
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	467.64	xs12-pool
4.25	0	467.65	xs12
8.94	0	467.72	xs12
11.39	0	467.7	xs12-ltb
13.04	0	467.33	xs12
13.94	0	467.08	xs12
14.54	0	466.74	xs12
15.01	0	465.84	BKF
15.05	0	465.78	xs12
15.53	0	465.05	xs12-ltoe
16.41	0	464.39	xs12
17.15	0	464.2	xs12
17.61	0	464.21	xs12-twg
18.26	0	464.1	xs12
19.24	0	464.39	xs12
19.96	0	464.98	xs12-rtoe
20.76	0	465.68	xs12
21.13	0	466.37	xs12
21.78	0	467.15	xs12
23.04	0	467.37	xs12-rtb
24.36	0	467.48	xs12-rtb
26.88	0	467.51	xs12
31.34	0	467.44	xs12
36.23	0	467.62	xs12
45.6	0	468.37	xs12
54.31	0	468.88	xs12

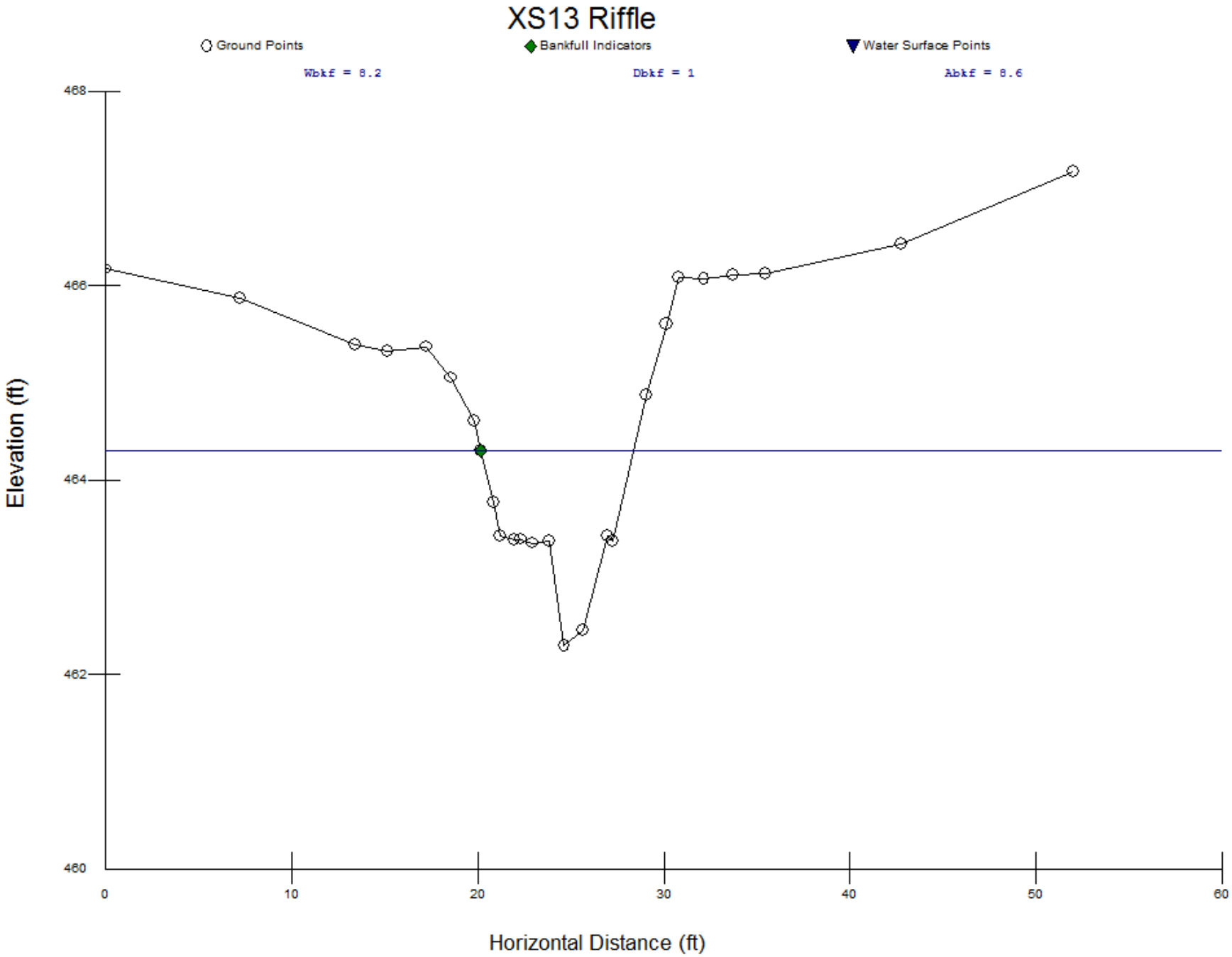
Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	467.58	467.58	467.58
Bankfull Elevation (ft)	465.84	465.84	465.84
Floodprone Width (ft)	23.22	-----	-----
Bankfull Width (ft)	5.84	2.92	2.92
Entrenchment Ratio	3.98	-----	-----
Mean Depth (ft)	1.2	1.24	1.16
Maximum Depth (ft)	1.74	1.68	1.74
Width/Depth Ratio	4.87	2.36	2.52
Bankfull Area (sq ft)	6.99	3.62	3.37
Wetted Perimeter (ft)	7.13	5.28	5.22
Hydraulic Radius (ft)	0.98	0.69	0.65
Begin BKF Station	15.01	15.01	17.93
End BKF Station	20.85	17.93	20.85

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS13 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 8.2
Dbkf = 1
Abkf = 8.6
468
466
464
462
460
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT1
Cross Section Name: XS13 Riffle
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	466.17	xs13-riffle
7.27	0	465.87	xs13
13.41	0	465.39	xs13
15.14	0	465.32	xs13
17.26	0	465.37	xs13-ltb
18.6	0	465.05	xs13
19.81	0	464.61	xs13
20.16	0	464.3	BKF
20.87	0	463.77	xs13
21.22	0	463.42	xs13-ltoe
21.95	0	463.38	xs13
22.32	0	463.39	xs13
22.95	0	463.35	xs13-twg
23.86	0	463.37	xs13
24.65	0	462.29	xs13-twg
25.66	0	462.45	xs13
26.99	0	463.42	xs13
27.27	0	463.37	xs13-rtoe
29.04	0	464.87	xs13
30.14	0	465.6	xs13
30.77	0	466.08	xs13-rtb
32.15	0	466.07	xs13
33.75	0	466.11	xs13
35.43	0	466.12	xs13
42.74	0	466.43	xs13
52	0	467.17	xs13

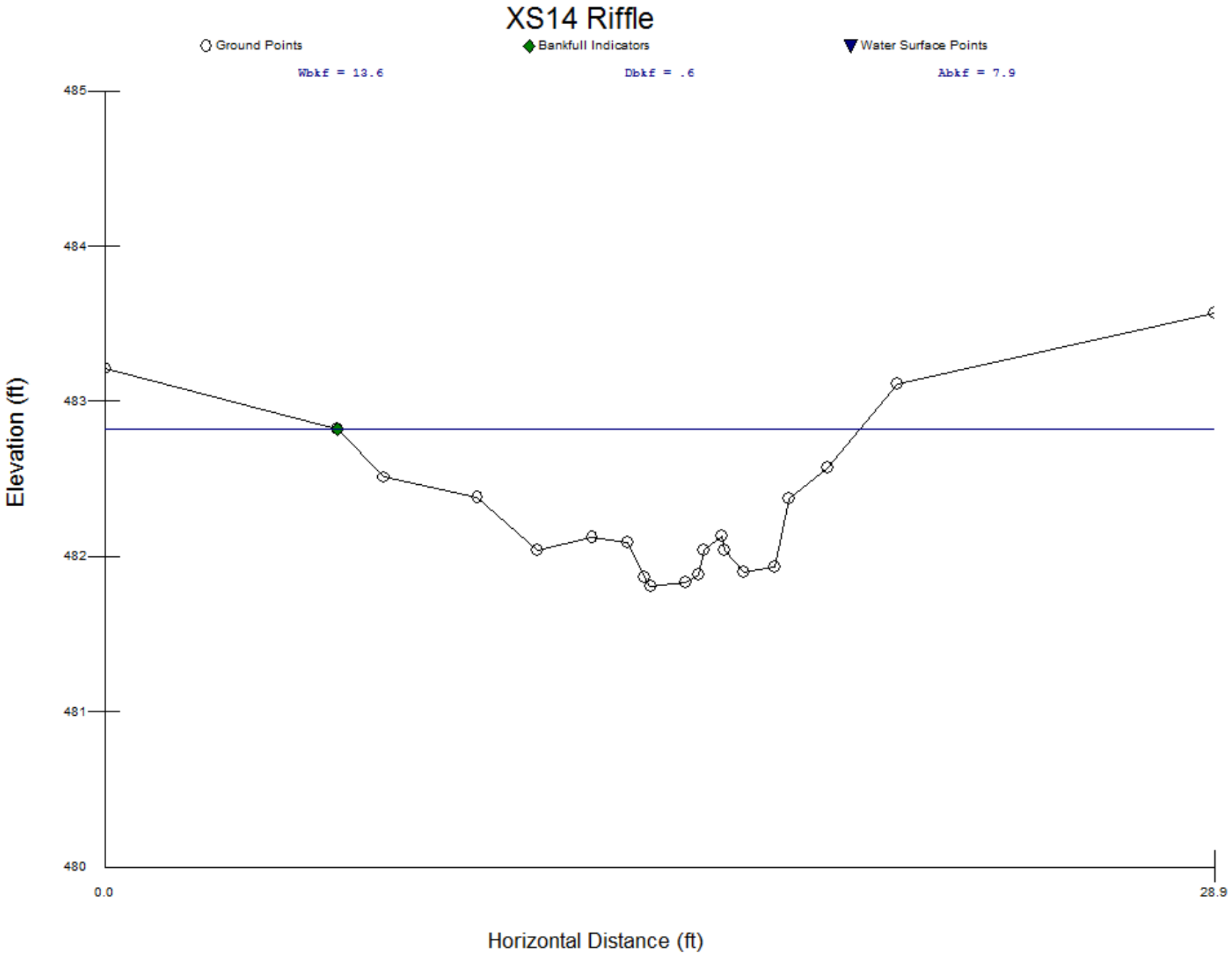
Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	466.31	466.31	466.31
Bankfull Elevation (ft)	464.3	464.3	464.3
Floodprone Width (ft)	39.91	-----	-----
Bankfull Width (ft)	8.21	4.1	4.11
Entrenchment Ratio	4.86	-----	-----
Mean Depth (ft)	1.04	0.82	1.27
Maximum Depth (ft)	2.01	1.48	2.01
Width/Depth Ratio	7.87	5.01	3.24
Bankfull Area (sq ft)	8.56	3.35	5.21
Wetted Perimeter (ft)	9.75	6.18	6.53
Hydraulic Radius (ft)	0.88	0.54	0.8
Begin BKF Station	20.16	20.16	24.26
End BKF Station	28.37	24.26	28.37

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS14 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 13.6
Dbkf = .6
Abkf = 7.9
485
484
483
482
481
480
Elevation (ft)
0.0
28.9
Horizontal Distance (ft)

XS14 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2
Cross Section Name: XS14 Riffle
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	483.21	xs14 riffle
6.04	0	482.82	BKF xs14
7.26	0	482.51	xs14
9.69	0	482.38	xs14
11.25	0	482.04	xs14
12.68	0	482.12	xs14
13.6	0	482.09	xs14
14.05	0	481.87	xs14
14.19	0	481.81	xs14
15.1	0	481.83	xs14
15.45	0	481.88	xs14
15.57	0	482.04	xs14
16.06	0	482.13	xs14
16.13	0	482.04	xs14
16.61	0	481.9	xs14
17.43	0	481.93	xs14
17.79	0	482.37	xs14
18.81	0	482.57	xs14
20.61	0	483.11	xs14
28.86	0	483.57	xs14

Cross Sectional Geometry

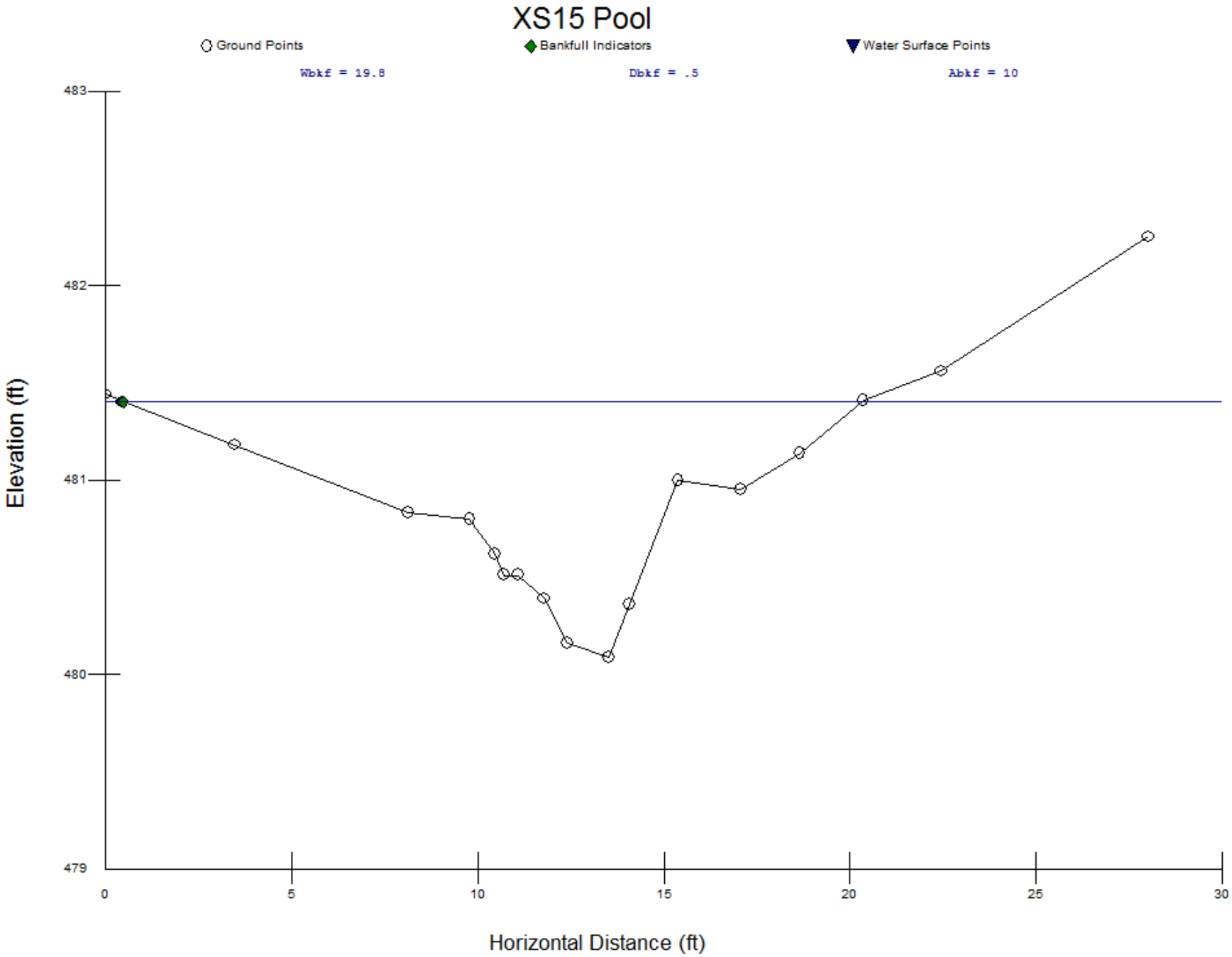
	Channel	Left	Right
Floodprone Elevation (ft)	483.83	483.83	483.83
Bankfull Elevation (ft)	482.82	482.82	482.82
Floodprone Width (ft)	28.86	-----	-----
Bankfull Width (ft)	13.6	6.8	6.8
Entrenchment Ratio	2.12	-----	-----
Mean Depth (ft)	0.58	0.47	0.69
Maximum Depth (ft)	1.01	0.78	1.01
Width/Depth Ratio	23.43	14.35	9.89
Bankfull Area (sq ft)	7.9	3.22	4.68
Wetted Perimeter (ft)	14.17	7.59	7.99
Hydraulic Radius (ft)	0.56	0.42	0.59
Begin BKF Station	6.04	6.04	12.84
End BKF Station	19.64	12.84	19.64

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

XS14 Riffle Report

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS15 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 19.8
Dbkf = .5
Abkf = 10
483
482
481
480
479
Elevation (ft)
0
5
10
15
20
25
30
Horizontal Distance (ft)

XS15 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2
Cross Section Name: XS15 Pool
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	481.44	xs15 pool
0.48	0	481.4	BKF
3.48	0	481.18	xs15
8.15	0	480.83	xs15
9.79	0	480.8	xs15
10.46	0	480.62	xs15
10.72	0	480.51	xs15
11.09	0	480.51	xs15
11.8	0	480.39	xs15
12.41	0	480.16	xs15
13.54	0	480.09	xs15
14.08	0	480.36	xs15
15.38	0	481	xs15
17.07	0	480.95	xs15
18.65	0	481.14	xs15
20.35	0	481.41	xs15
22.46	0	481.56	xs15
28	0	482.25	xs15

Cross Sectional Geometry

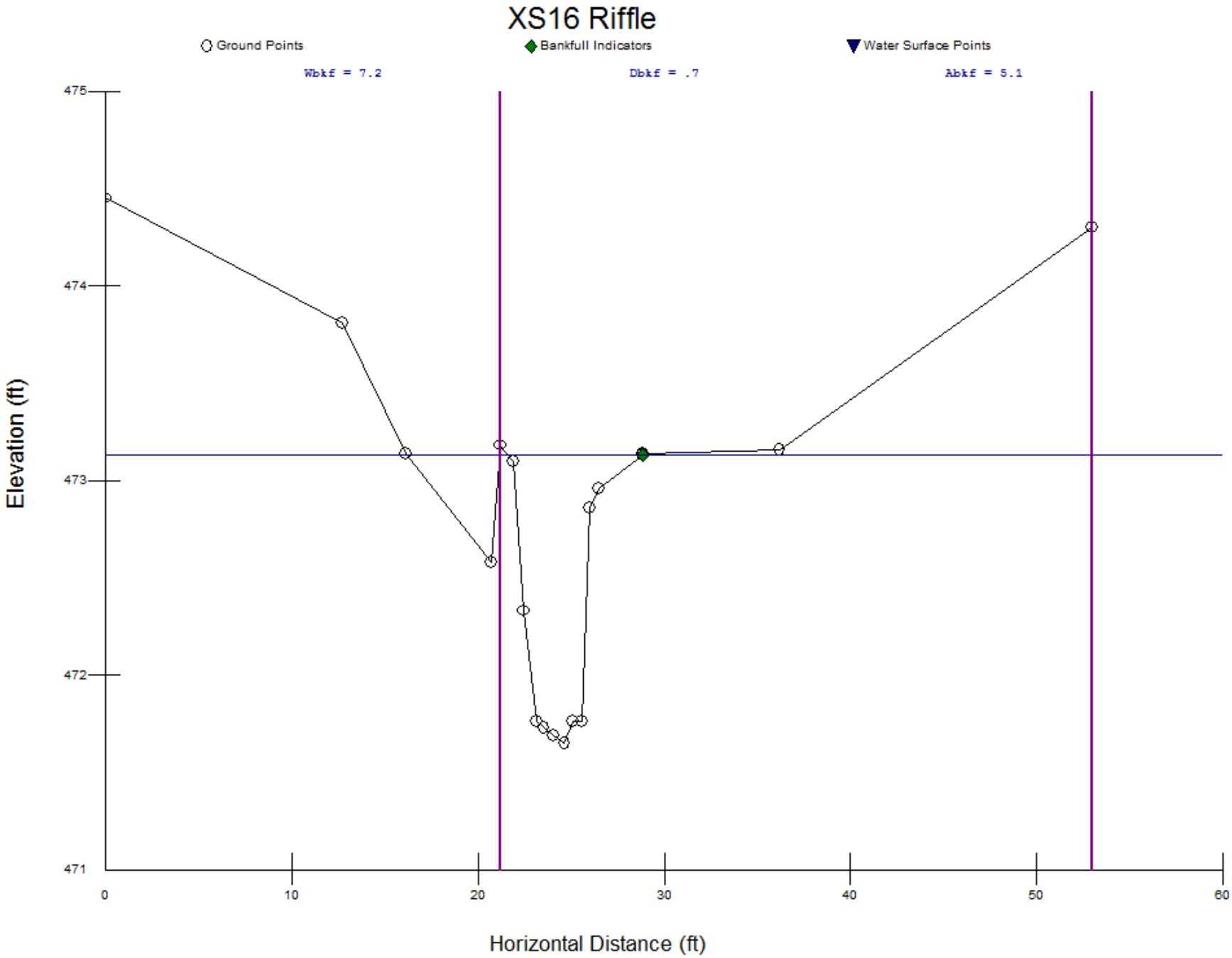
	Channel	Left	Right
Floodprone Elevation (ft)	482.71	482.71	482.71
Bankfull Elevation (ft)	481.4	481.4	481.4
Floodprone Width (ft)	28	-----	-----
Bankfull Width (ft)	19.81	9.9	9.91
Entrenchment Ratio	1.41	-----	-----
Mean Depth (ft)	0.51	0.36	0.65
Maximum Depth (ft)	1.31	0.76	1.31
Width/Depth Ratio	39.21	27.73	15.17
Bankfull Area (sq ft)	10.01	3.53	6.47
Wetted Perimeter (ft)	20.17	10.7	10.99
Hydraulic Radius (ft)	0.5	0.33	0.59
Begin BKF Station	0.48	0.48	10.38
End BKF Station	20.29	10.38	20.29

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side

Slope
Shear Stress (lb/sq ft)
Movable Particle (mm)


XS16 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 7.2
Dbkf = .7
Abkf = 5.1
475
474
473
472
471
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

XS16 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2
Cross Section Name: XS16 Riffle
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	474.45	XS16 RIFFLE
12.72	0	473.81	xs16
16.13	0	473.14	xs16
20.74	0	472.58	xs16
21.2	0	473.18	xs16
21.9	0	473.1	xs16
22.44	0	472.33	xs16
23.13	0	471.76	xs16
23.54	0	471.73	xs16
24.06	0	471.69	xs16
24.65	0	471.65	xs16
25.09	0	471.76	xs16
25.59	0	471.76	xs16
25.99	0	472.86	xs16
26.5	0	472.96	xs16
28.85	0	473.13	BKF
28.85	0	473.14	xs16
36.19	0	473.16	xs16
52.96	0	474.3	xs16

Cross Sectional Geometry

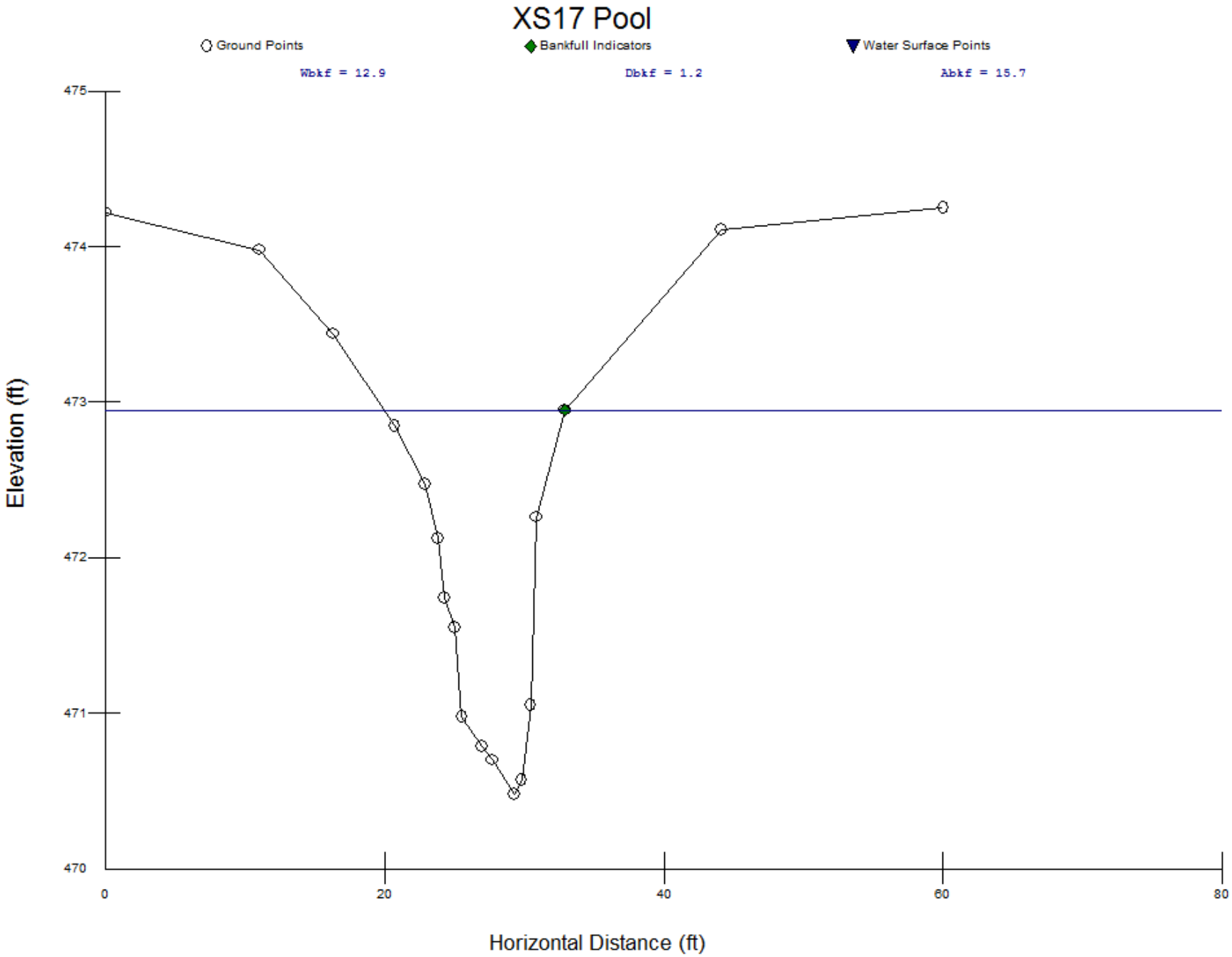
	Channel	Left	Right
Floodprone Elevation (ft)	474.61	474.61	474.61
Bankfull Elevation (ft)	473.13	473.13	473.13
Floodprone Width (ft)	52.96	-----	-----
Bankfull Width (ft)	7.21	3.6	3.61
Entrenchment Ratio	7.34	-----	-----
Mean Depth (ft)	0.71	1.1	0.31
Maximum Depth (ft)	1.48	1.48	1.37
Width/Depth Ratio	10.21	3.26	11.64
Bankfull Area (sq ft)	5.1	3.98	1.12
Wetted Perimeter (ft)	8.62	5.6	5.77
Hydraulic Radius (ft)	0.59	0.71	0.19
Begin BKF Station	21.64	21.64	25.24
End BKF Station	28.85	25.24	28.85

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

XS16 Riffle Report

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS17 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 12.9
Dbkf = 1.2
Abkf = 15.7
475
474
473
472
471
470
Elevation (ft)
0
20
40
60
80
Horizontal Distance (ft)

XS17 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2
Cross Section Name: XS17 Pool
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	474.22	XS17 POOL
11.08	0	473.98	xs17
16.33	0	473.44	xs17
20.73	0	472.85	xs17
22.94	0	472.47	xs17
23.83	0	472.12	xs17
24.33	0	471.74	xs17
25.08	0	471.55	xs17
25.54	0	470.98	xs17
26.98	0	470.79	xs17
27.72	0	470.7	xs17
29.28	0	470.48	xs17
29.81	0	470.57	xs17
30.47	0	471.05	xs17
30.87	0	472.26	xs17
32.89	0	472.95	BKF xs17
44.11	0	474.11	xs17
60	0	474.25	xs17

Cross Sectional Geometry

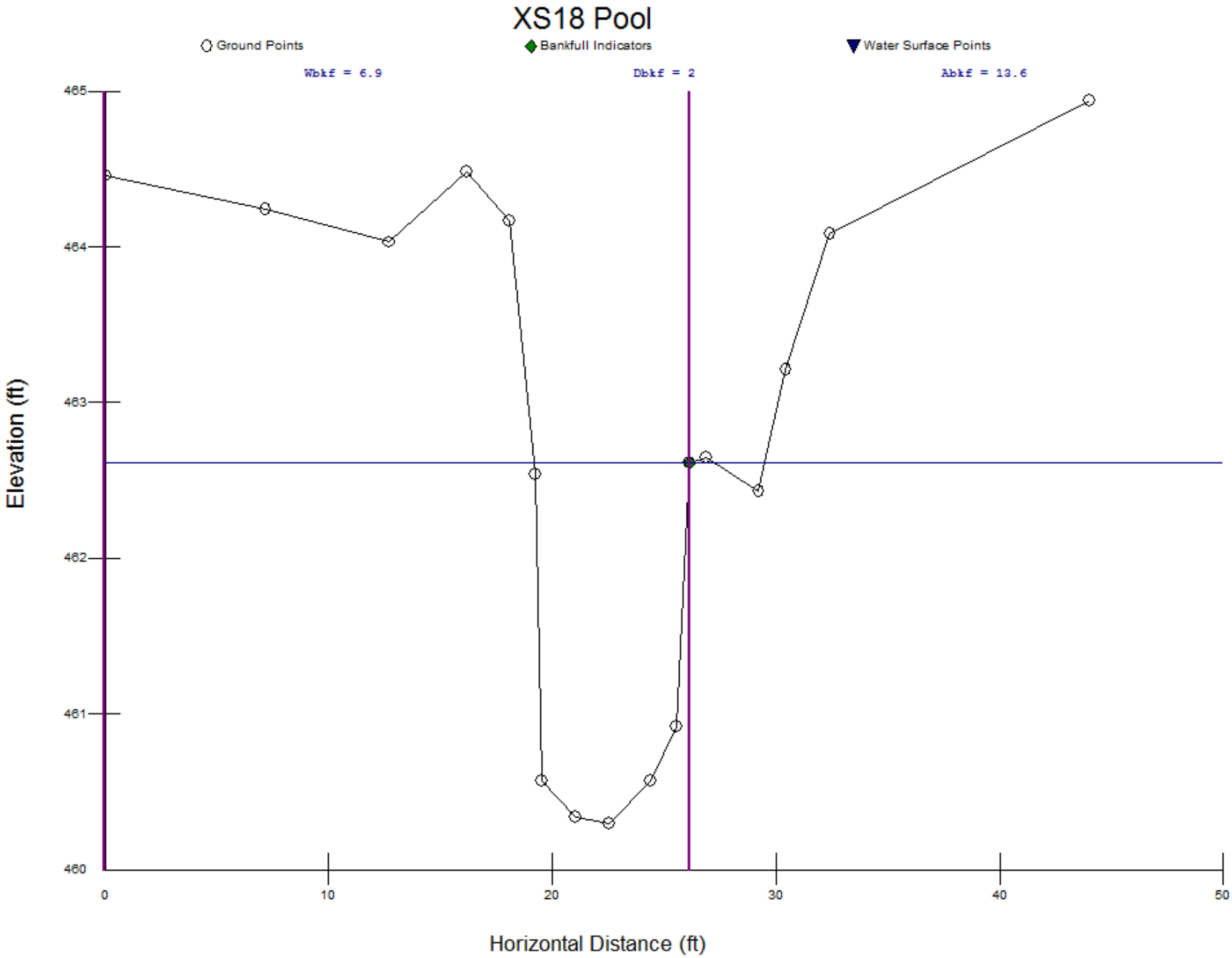
	Channel	Left	Right
Floodprone Elevation (ft)	475.42	475.42	475.42
Bankfull Elevation (ft)	472.95	472.95	472.95
Floodprone Width (ft)	60	-----	-----
Bankfull Width (ft)	12.91	6.46	6.45
Entrenchment Ratio	4.65	-----	-----
Mean Depth (ft)	1.22	0.83	1.61
Maximum Depth (ft)	2.47	2.09	2.47
Width/Depth Ratio	10.59	7.79	4.01
Bankfull Area (sq ft)	15.72	5.35	10.37
Wetted Perimeter (ft)	14.62	9.08	9.72
Hydraulic Radius (ft)	1.08	0.59	1.07
Begin BKF Station	19.98	19.98	26.44
End BKF Station	32.89	26.44	32.89

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side

Slope
Shear Stress (lb/sq ft)
Movable Particle (mm)


XS18 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 6.9
Dbkf = 2
Abkf = 13.6
Elevation (ft)
465
464
463
462
461
460
0
10
20
30
40
50
Horizontal Distance (ft)

XS18 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2
Cross Section Name: XS18 Pool
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	464.46	xs18 pool
7.17	0	464.24	xs18
12.72	0	464.03	xs18
16.16	0	464.48	xs18
18.07	0	464.17	xs18
19.26	0	462.54	xs18
19.53	0	460.57	xs18
21.05	0	460.34	xs18
22.54	0	460.3	xs18
24.39	0	460.57	xs18
25.53	0	460.92	xs18
26.13	0	462.61	BKF xs18
26.9	0	462.65	xs18
29.22	0	462.43	xs18
30.44	0	463.21	xs18 pool
32.41	0	464.08	xs18
44	0	464.94	xs18

Cross Sectional Geometry

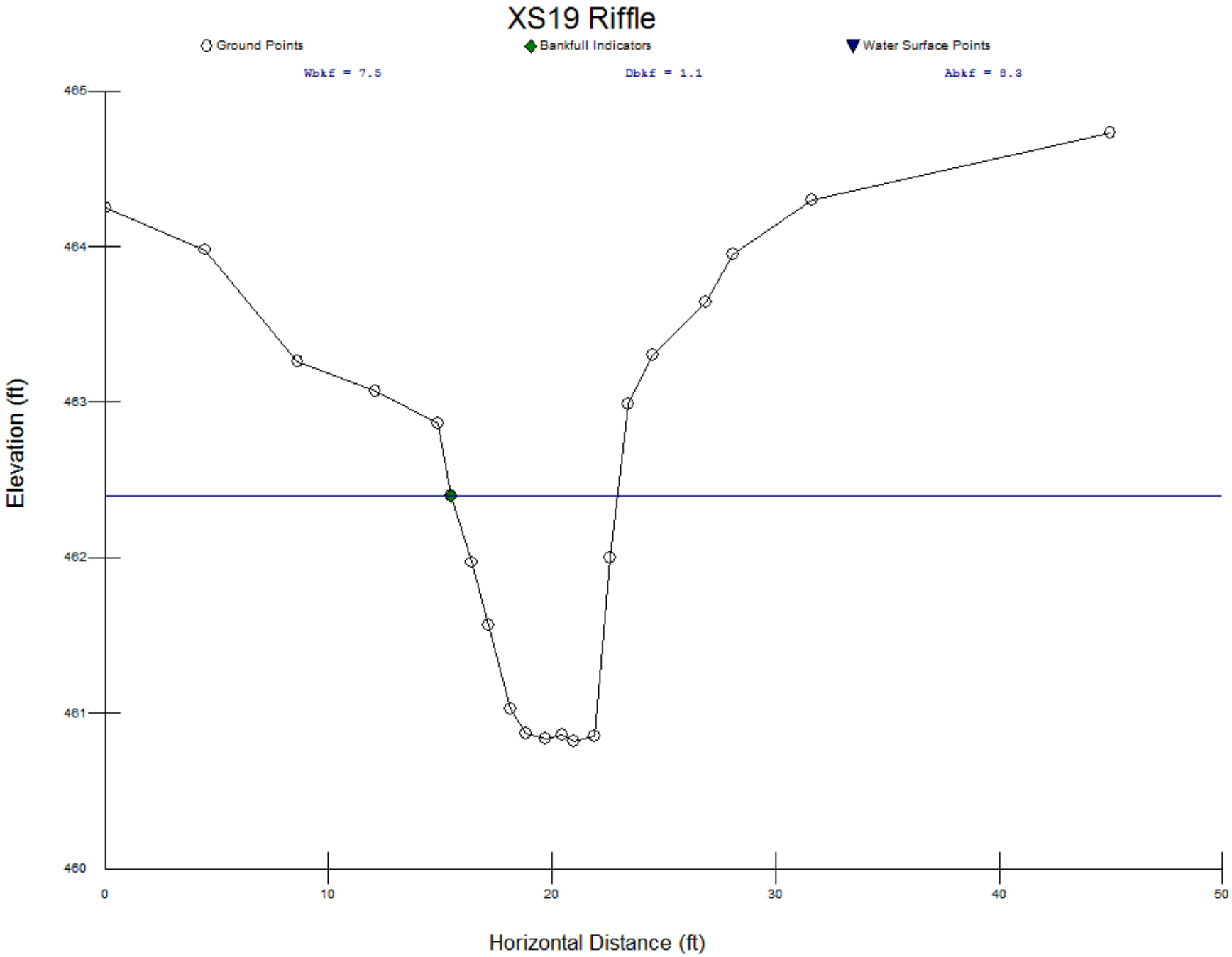
	Channel	Left	Right
Floodprone Elevation (ft)	464.92	464.92	464.92
Bankfull Elevation (ft)	462.61	462.61	462.61
Floodprone Width (ft)	43.73	-----	-----
Bankfull Width (ft)	6.92	3.46	3.46
Entrenchment Ratio	6.32	-----	-----
Mean Depth (ft)	1.97	2.1	1.84
Maximum Depth (ft)	2.31	2.31	2.29
Width/Depth Ratio	3.51	1.65	1.88
Bankfull Area (sq ft)	13.63	7.27	6.36
Wetted Perimeter (ft)	9.96	7.53	7.02
Hydraulic Radius (ft)	1.37	0.97	0.91
Begin BKF Station	19.21	19.21	22.67
End BKF Station	26.13	22.67	26.13

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			

Shear Stress (lb/sq ft)
Movable Particle (mm)


XS19 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 7.5
Dbkf = 1.1
Abkf = 8.3
Elevation (ft)
465
464
463
462
461
460
0
10
20
30
40
50
Horizontal Distance (ft)

XS19 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2
Cross Section Name: XS19 Riffle
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	464.25	xs19 riffle
4.48	0	463.98	xs19
8.62	0	463.26	xs19
12.09	0	463.07	xs19
14.88	0	462.86	xs19
15.46	0	462.4	BKF xs19
16.41	0	461.97	xs19
17.16	0	461.57	xs19
18.12	0	461.03	xs19
18.82	0	460.87	xs19
19.69	0	460.84	xs19
20.44	0	460.86	xs19
20.95	0	460.82	xs19
21.92	0	460.85	xs19
22.58	0	462	xs19
23.41	0	462.99	xs19
24.5	0	463.3	xs19
26.87	0	463.64	xs19
28.07	0	463.95	xs19
31.61	0	464.3	xs19
44.98	0	464.73	xs19

Cross Sectional Geometry

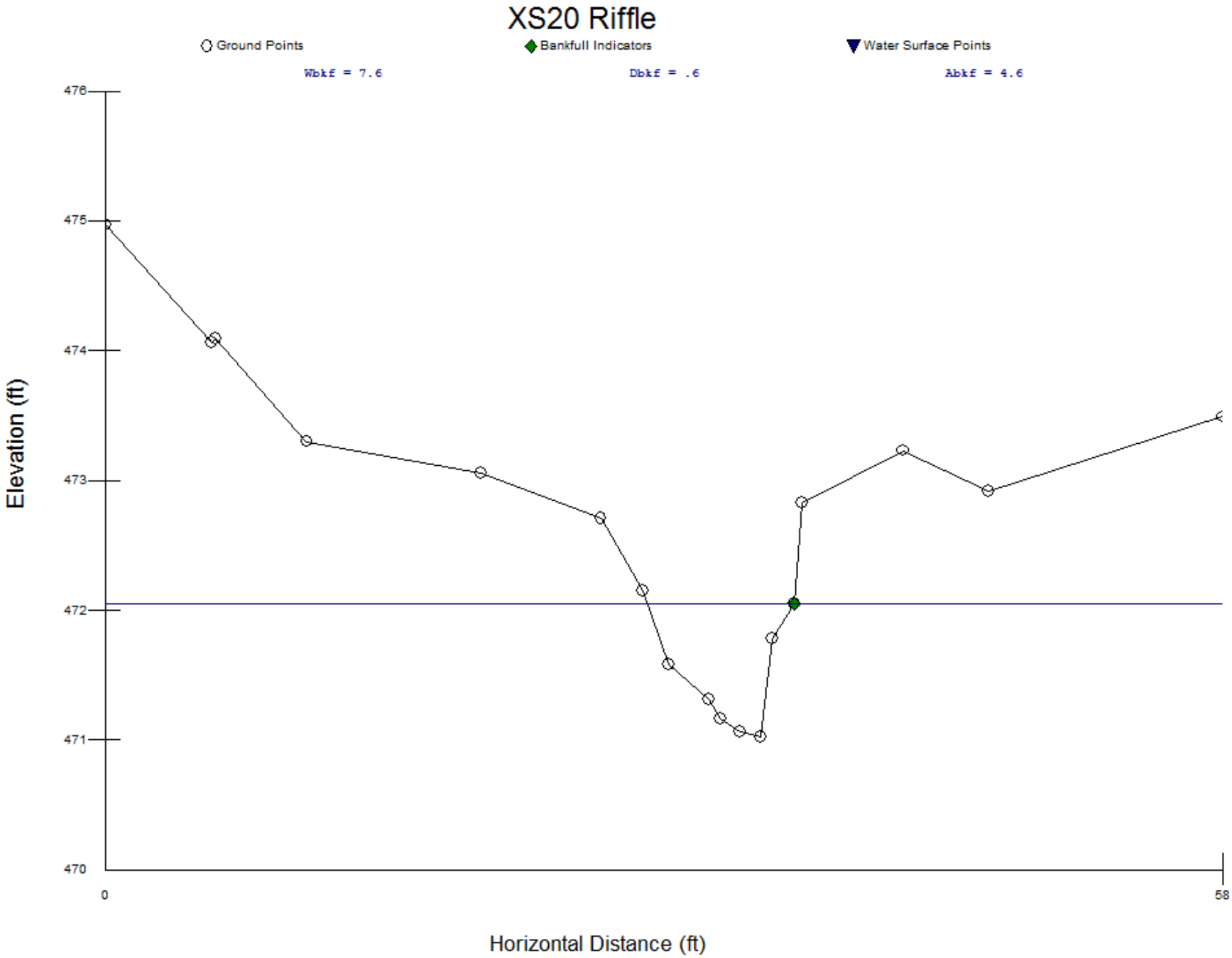
	Channel	Left	Right
Floodprone Elevation (ft)	463.98	463.98	463.98
Bankfull Elevation (ft)	462.4	462.4	462.4
Floodprone Width (ft)	23.89	-----	-----
Bankfull Width (ft)	7.46	3.73	3.73
Entrenchment Ratio	3.2	-----	-----
Mean Depth (ft)	1.11	0.89	1.33
Maximum Depth (ft)	1.58	1.54	1.58
Width/Depth Ratio	6.71	4.2	2.8
Bankfull Area (sq ft)	8.28	3.32	4.96
Wetted Perimeter (ft)	8.66	5.63	6.12
Hydraulic Radius (ft)	0.96	0.59	0.81
Begin BKF Station	15.46	15.46	19.19
End BKF Station	22.92	19.19	22.92

Entrainment Calculations

XS19 Riffle Report

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			


XS20 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 7.6
Dbkf = .6
Abkf = 4.6
476
475
474
473
472
471
470
Elevation (ft)
0
58
Horizontal Distance (ft)

XS20 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2A
Cross Section Name: XS20 Riffle
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	474.97	xs20 RIFFLE
5.51	0	474.06	xs20
5.76	0	474.09	xs20
10.46	0	473.3	xs20
19.47	0	473.06	xs20
25.71	0	472.71	xs20
27.88	0	472.15	xs20
29.22	0	471.58	xs20
31.34	0	471.31	xs20
31.89	0	471.16	xs20
32.95	0	471.06	xs20
34.01	0	471.02	xs20
34.61	0	471.78	xs20
35.73	0	472.05	BKF xs20
36.14	0	472.83	xs20
41.37	0	473.23	xs20
45.83	0	472.92	xs20
58	0	473.49	xs20

Cross Sectional Geometry

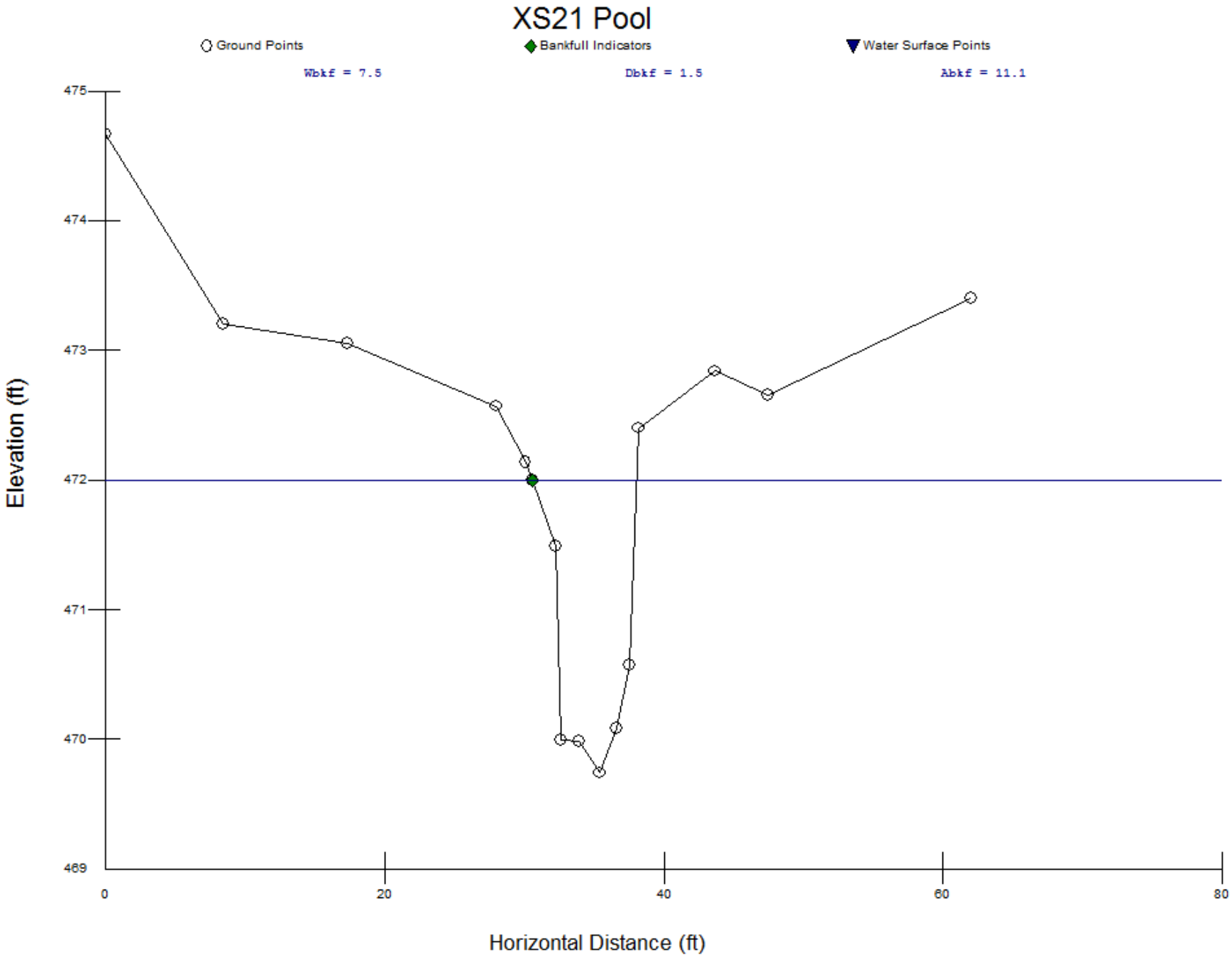
	Channel	Left	Right
Floodprone Elevation (ft)	473.08	473.08	473.08
Bankfull Elevation (ft)	472.05	472.05	472.05
Floodprone Width (ft)	26.41	-----	-----
Bankfull Width (ft)	7.61	3.8	3.81
Entrenchment Ratio	3.47	-----	-----
Mean Depth (ft)	0.6	0.53	0.68
Maximum Depth (ft)	1.03	0.89	1.03
Width/Depth Ratio	12.61	7.18	5.62
Bankfull Area (sq ft)	4.6	2.02	2.58
Wetted Perimeter (ft)	8.15	4.83	5.11
Hydraulic Radius (ft)	0.56	0.42	0.51
Begin BKF Station	28.12	28.12	31.92
End BKF Station	35.73	31.92	35.73

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side

Slope
Shear Stress (lb/sq ft)
Movable Particle (mm)


XS21 Pool
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 7.5
Dbkf = 1.5
Abkf = 11.1
475
474
473
472
471
470
469
Elevation (ft)
0
20
40
60
80
Horizontal Distance (ft)

XS21 Pool Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT2A
Cross Section Name: XS21 Pool
Survey Date: 11/01/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	474.67	XS21 POOL
8.47	0	473.2	xs21
17.35	0	473.05	xs21
28.02	0	472.57	xs21
30.09	0	472.14	xs21
30.6	0	472	BKF
32.31	0	471.49	xs21
32.67	0	469.99	xs21
33.94	0	469.98	xs21
35.46	0	469.74	xs21
36.65	0	470.08	xs21
37.57	0	470.57	xs21
38.19	0	472.4	xs21
43.68	0	472.84	xs21
47.46	0	472.65	xs21
62	0	473.4	xs21

Cross Sectional Geometry

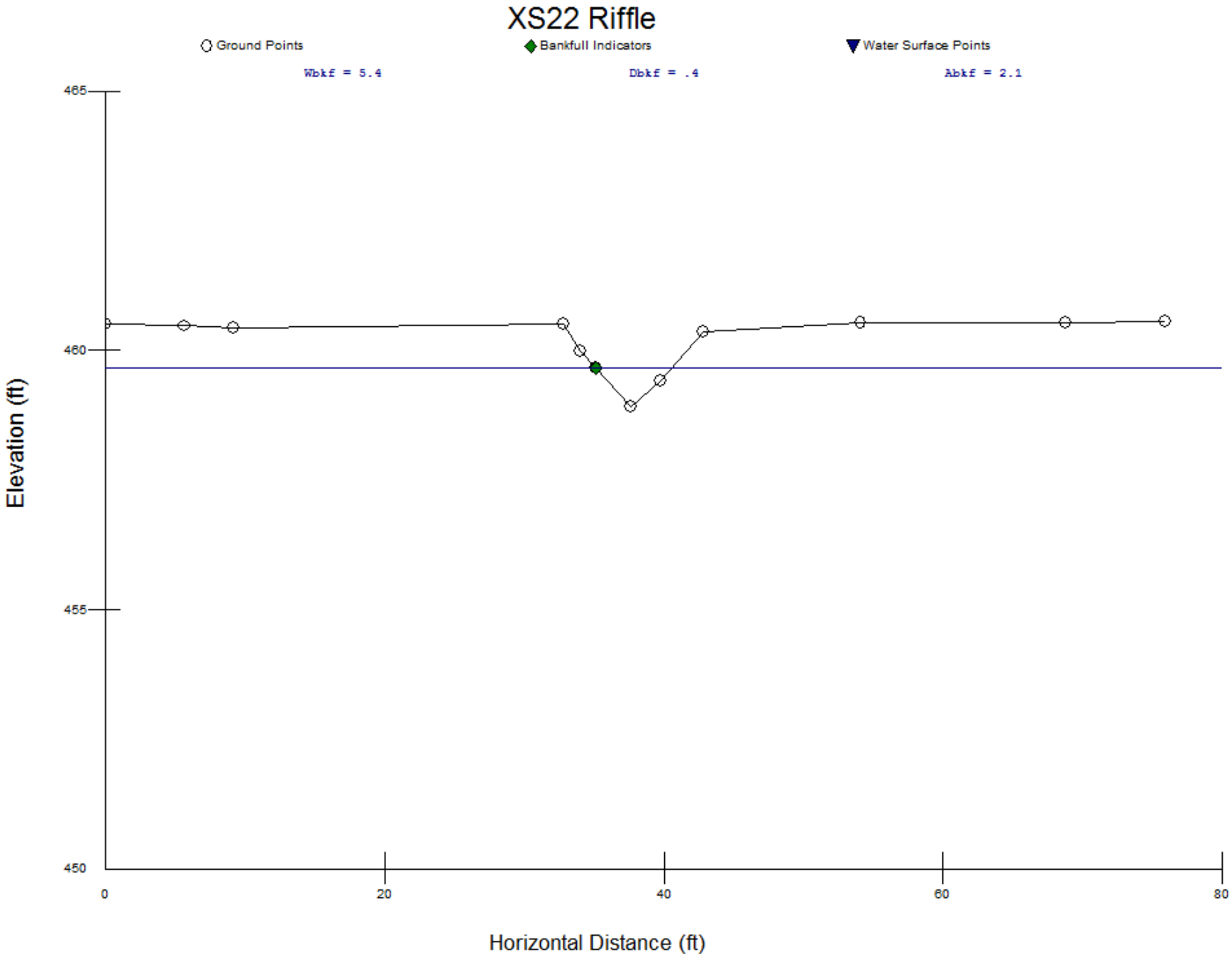
	Channel	Left	Right
Floodprone Elevation (ft)	474.26	474.26	474.26
Bankfull Elevation (ft)	472	472	472
Floodprone Width (ft)	59.64	-----	-----
Bankfull Width (ft)	7.45	3.73	3.72
Entrenchment Ratio	8	-----	-----
Mean Depth (ft)	1.49	1.14	1.84
Maximum Depth (ft)	2.26	2.08	2.26
Width/Depth Ratio	5.02	3.27	2.03
Bankfull Area (sq ft)	11.08	4.25	6.83
Wetted Perimeter (ft)	9.93	7.07	7.01
Hydraulic Radius (ft)	1.12	0.6	0.97
Begin BKF Station	30.6	30.6	34.33
End BKF Station	38.05	34.33	38.05

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			

Movable Particle (mm)


XS22 Riffle
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 5.4
Dbkf = .4
Abkf = 2.1
465
460
455
450
Elevation (ft)
0
20
40
60
80
Horizontal Distance (ft)

XS22 Riffle Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Norkett
Reach Name: UT3
Cross Section Name: XS22 Riffle
Survey Date: 11/06/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	460.51	
5.66	0	460.47	
9.17	0	460.44	
32.84	0	460.5	
34	0	459.98	
35.1	0	459.65	BKF
37.62	0	458.91	
39.8	0	459.42	
42.8	0	460.35	
54.07	0	460.52	
68.76	0	460.54	
75.88	0	460.56	

Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	460.39	460.39	460.39
Bankfull Elevation (ft)	459.65	459.65	459.65
Floodprone Width (ft)	12.37	-----	-----
Bankfull Width (ft)	5.44	2.78	2.66
Entrenchment Ratio	2.27	-----	-----
Mean Depth (ft)	0.38	0.4	0.36
Maximum Depth (ft)	0.74	0.74	0.68
Width/Depth Ratio	14.27	6.92	7.38
Bankfull Area (sq ft)	2.08	1.12	0.96
Wetted Perimeter (ft)	5.64	3.57	3.43
Hydraulic Radius (ft)	0.37	0.31	0.28
Begin BKF Station	35.1	35.1	37.88
End BKF Station	40.54	37.88	40.54

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			
Movable Particle (mm)			

PEBBLE COUNT ANALYSIS WORKSHEET

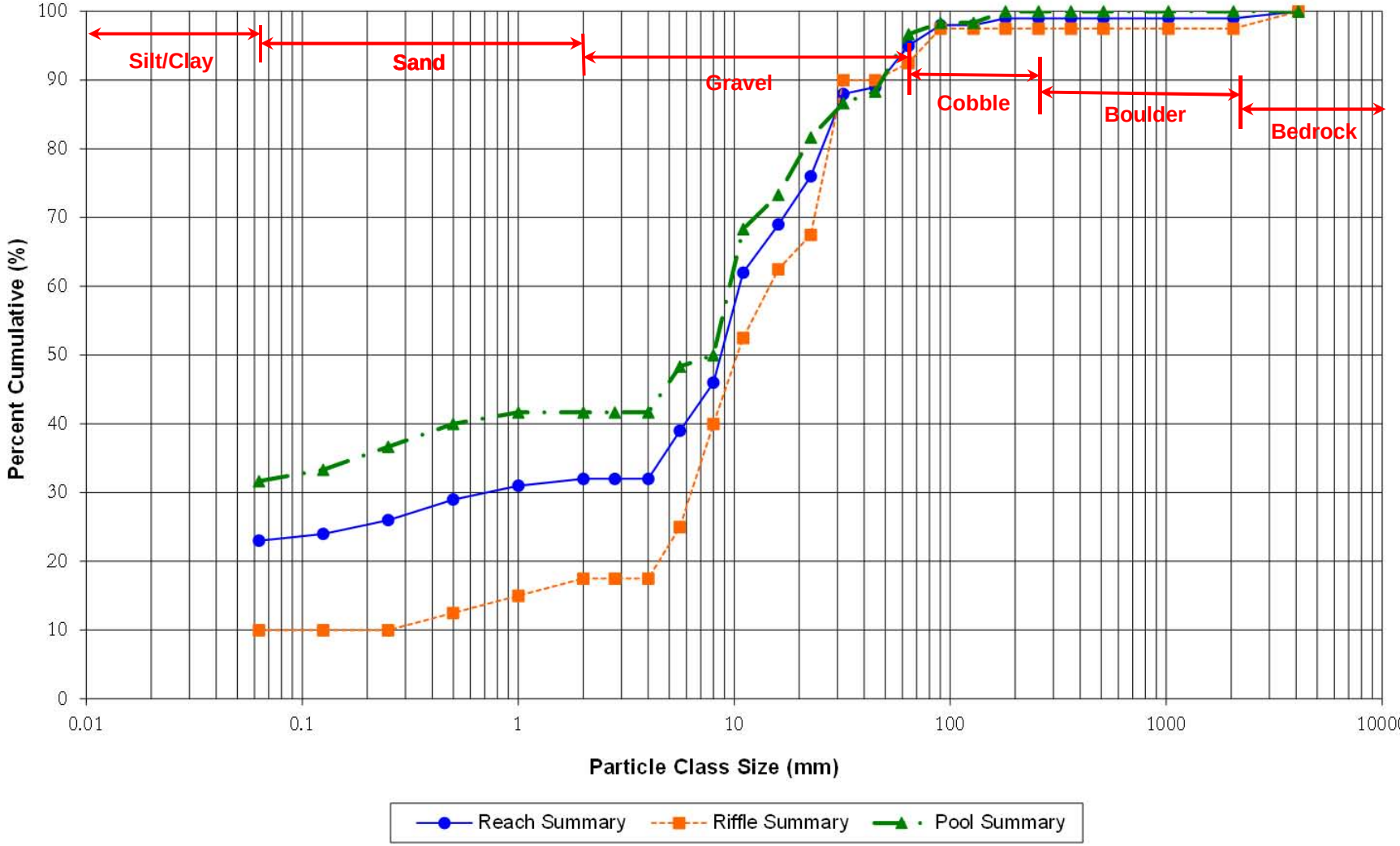
Project Name:	Norkett Branch	**Data Collected By:**	JK, IE
Location:	Union County, NC	**Data Collected On:**	8/28/2012
Job #:	005-02134	**Reach:**	Norkett Branch - Reach 1
Date:	9/18/2012	**Cross Section #:**	n/a

Particle Class		Diameter (mm)		Particle Count			Riffle Summary		Pool Summary		Reach Summary	
		min	max	Riffle	Pool	Total	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative
SILT/CLAY	Silt/Clay	0.000	0.062	4	19	23	10.0	10	32	32	23	23
SAND	Very fine	0.062	0.125		1	1		10	2	33	1	24
	Fine	0.125	0.250		2	2		10	3	37	2	26
	Medium	0.250	0.500	1	2	3	2.5	13	3	40	3	29
	Coarse	0.5	1.0	1	1	2	2.5	15	2	42	2	31
	Very Coarse	1.0	2.0	1		1	2.5	18		42	1	32
GRAVEL	Very Fine	2.0	2.8					18		42		32
	Very Fine	2.8	4.0					18		42		32
	Fine	4.0	5.7	3	4	7	7.5	25	7	48	7	39
	Fine	5.7	8.0	6	1	7	15.0	40	2	50	7	46
	Medium	8.0	11.3	5	11	16	12.5	53	18	68	16	62
	Medium	11.3	16.0	4	3	7	10.0	63	5	73	7	69
	Coarse	16.0	22.6	2	5	7	5.0	68	8	82	7	76
	Coarse	22.6	32	9	3	12	22.5	90	5	87	12	88
	Very Coarse	32	45		1	1		90	2	88	1	89
	Very Coarse	45	64	1	5	6	2.5	93	8	97	6	95
COBBLE	Small	64	90	2	1	3	5.0	98	2	98	3	98
	Small	90	128					98		98		98
	Large	128	180		1	1		98	2	100	1	99
	Large	180	256					98		100		99
BOULDER	Small	256	362					98		100		99
	Small	362	512					98		100		99
	Medium	512	1024					98		100		99
	Large/Very Large	1024	2048					98		100		99
BEDROCK	Bedrock	2048	>2048	1		1	2.50	100		100	1	100
			Total	**40**	**60**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Largest Particle (mm): _____

Riffle Channel materials (mm)		Pool Channel materials		Cumulative Channel materials	
D_{16} =	Silt/Clay	D_{16} =	Silt/Clay	D_{16} =	Silt/Clay
D_{35} =	7.10	D_{35} =	0.18	D_{35} =	4.62
D_{50} =	10.32	D_{50} =	8.00	D_{50} =	8.66
D_{84} =	29.17	D_{84} =	26.58	D_{84} =	28.50
D_{95} =	75.89	D_{95} =	59.65	D_{95} =	64.00
D_{100} =	>2048	D_{99} =	180	D_{99} =	>2048

Norkett Branch - Reach 1
Reach-Wide Pebble Count Particle Distribution



PEBBLE COUNT ANALYSIS WORKSHEET

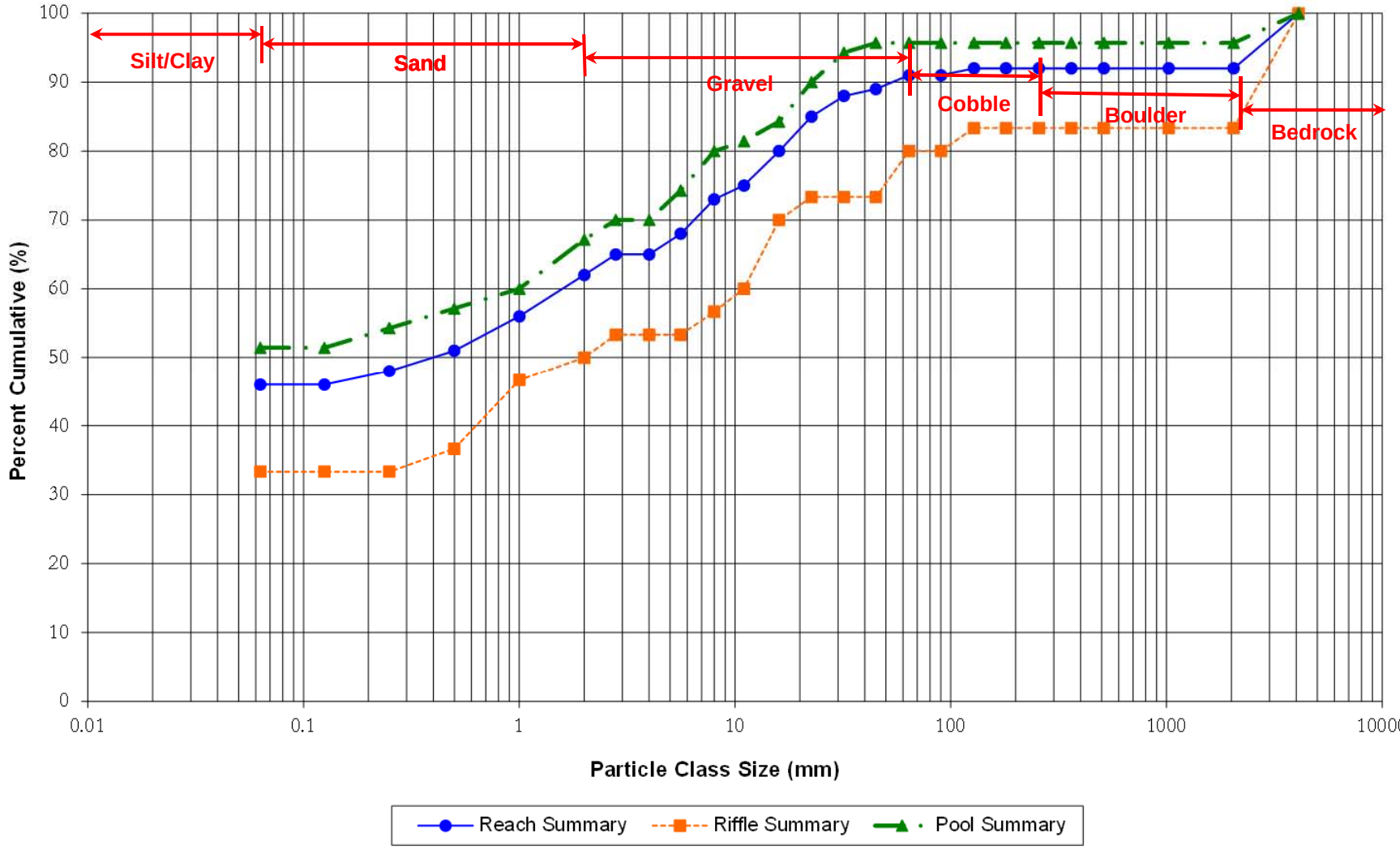
Project Name:	Norkett Branch	**Data Collected By:**	JK, IE
Location:	Union County, NC	**Data Collected On:**	8/27/2012
Job #:	005-02134	**Reach:**	Norkett Branch - Reach 2
Date:	9/18/2012	**Cross Section #:**	n/a

Particle Class		Diameter (mm)		Particle Count			Riffle Summary		Pool Summary		Reach Summary	
		min	max	Riffle	Pool	Total	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative
SILT/CLAY	Silt/Clay	0.000	0.062	10	36	46	33.3	33	51	51	46	46
SAND	Very fine	0.062	0.125					33		51		46
	Fine	0.125	0.250		2	2		33	3	54	2	48
	Medium	0.250	0.500	1	2	3	3.3	37	3	57	3	51
	Coarse	0.5	1.0	3	2	5	10.0	47	3	60	5	56
	Very Coarse	1.0	2.0	1	5	6	3.3	50	7	67	6	62
GRAVEL	Very Fine	2.0	2.8	1	2	3	3.3	53	3	70	3	65
	Very Fine	2.8	4.0					53		70		65
	Fine	4.0	5.7		3	3		53	4	74	3	68
	Fine	5.7	8.0	1	4	5	3.3	57	6	80	5	73
	Medium	8.0	11.3	1	1	2	3.3	60	1	81	2	75
	Medium	11.3	16.0	3	2	5	10.0	70	3	84	5	80
	Coarse	16.0	22.6	1	4	5	3.3	73	6	90	5	85
	Coarse	22.6	32		3	3		73	4	94	3	88
	Very Coarse	32	45		1	1		73	1	96	1	89
	Very Coarse	45	64	2		2	6.7	80		96	2	91
COBBLE	Small	64	90					80		96		91
	Small	90	128	1		1	3.3	83		96	1	92
	Large	128	180					83		96		92
	Large	180	256					83		96		92
BOULDER	Small	256	362					83		96		92
	Small	362	512					83		96		92
	Medium	512	1024					83		96		92
	Large/Very Large	1024	2048					83		96		92
BEDROCK	Bedrock	2048	>2048	5	3	8	16.67	100	4	100	8	100
			Total	**30**	**70**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Largest Particle (mm): _____

Riffle Channel materials (mm)		Pool Channel materials		Cumulative Channel materials	
D_{16} =	Silt/Clay	D_{16} =	Silt/Clay	D_{16} =	Silt/Clay
D_{35} =	0.35	D_{35} =	Silt/Clay	D_{35} =	Silt/Clay
D_{50} =	2.00	D_{50} =	Silt/Clay	D_{50} =	0.40
D_{84} =	2105.58	D_{84} =	15.41	D_{84} =	21.09
D_{95} =	3326.99	D_{95} =	37.95	D_{95} =	2655.93
D_{100} =	>2048	D_{99} =	>2048	D_{99} =	>2048

Norkett Branch - Reach 2
Reach-Wide Pebble Count Particle Distribution



PEBBLE COUNT ANALYSIS WORKSHEET

Project Name:	Norkett Branch	**Data Collected By:**	JK, IE
Location:	Union County, NC	**Data Collected On:**	9/10/2012
Job #:	005-02134	**Reach:**	UT1
Date:	9/18/2012	**Cross Section #:**	n/a

Particle Class		Diameter (mm)		Particle Count			Riffle Summary		Pool Summary		Reach Summary	
		min	max	Riffle	Pool	Total	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative
SILT/CLAY	Silt/Clay	0.000	0.062	18	52	70	60.0	60	74	74	70	70
SAND	Very fine	0.062	0.125					60		74		70
	Fine	0.125	0.250	1	3	4	3.3	63	4	79	4	74
	Medium	0.250	0.500	2	3	5	6.7	70	4	83	5	79
	Coarse	0.5	1.0	2	6	8	6.7	77	9	91	8	87
	Very Coarse	1.0	2.0					77		91		87
GRAVEL	Very Fine	2.0	2.8					77		91		87
	Very Fine	2.8	4.0					77		91		87
	Fine	4.0	5.7	1	1	2	3.3	80	1	93	2	89
	Fine	5.7	8.0	2	2	4	6.7	87	3	96	4	93
	Medium	8.0	11.3	3	1	4	10.0	97	1	97	4	97
	Medium	11.3	16.0		1	1		97	1	99	1	98
	Coarse	16.0	22.6					97		99		98
	Coarse	22.6	32					97		99		98
	Very Coarse	32	45	1		1	3.3	100		99	1	99
	Very Coarse	45	64					100		99		99
COBBLE	Small	64	90					100		99		99
	Small	90	128					100		99		99
	Large	128	180					100		99		99
	Large	180	256					100		99		99
BOULDER	Small	256	362					100		99		99
	Small	362	512					100		99		99
	Medium	512	1024					100		99		99
	Large/Very Large	1024	2048					100		99		99
BEDROCK	Bedrock	2048	>2048		1	1		100	1	100	1	100
			Total	**30**	**70**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Largest Particle (mm): _____

Riffle Channel materials (mm)		Pool Channel materials		Cumulative Channel materials	
D_{16} =	Silt/Clay	D_{16} =	Silt/Clay	D_{16} =	Silt.Clay
D_{35} =	Silt/Clay	D_{35} =	Silt/Clay	D_{35} =	Silt.Clay
D_{50} =	Silt/Clay	D_{50} =	Silt/Clay	D_{50} =	Silt.Clay
D_{84} =	6.94	D_{84} =	0.55	D_{84} =	0.77
D_{95} =	10.43	D_{95} =	7.32	D_{95} =	9.38
D_{100} =	45	D_{99} =	>2048	D_{99} =	>2048

UT1
Reach-Wide Pebble Count Particle Distribution

PEBBLE COUNT ANALYSIS WORKSHEET

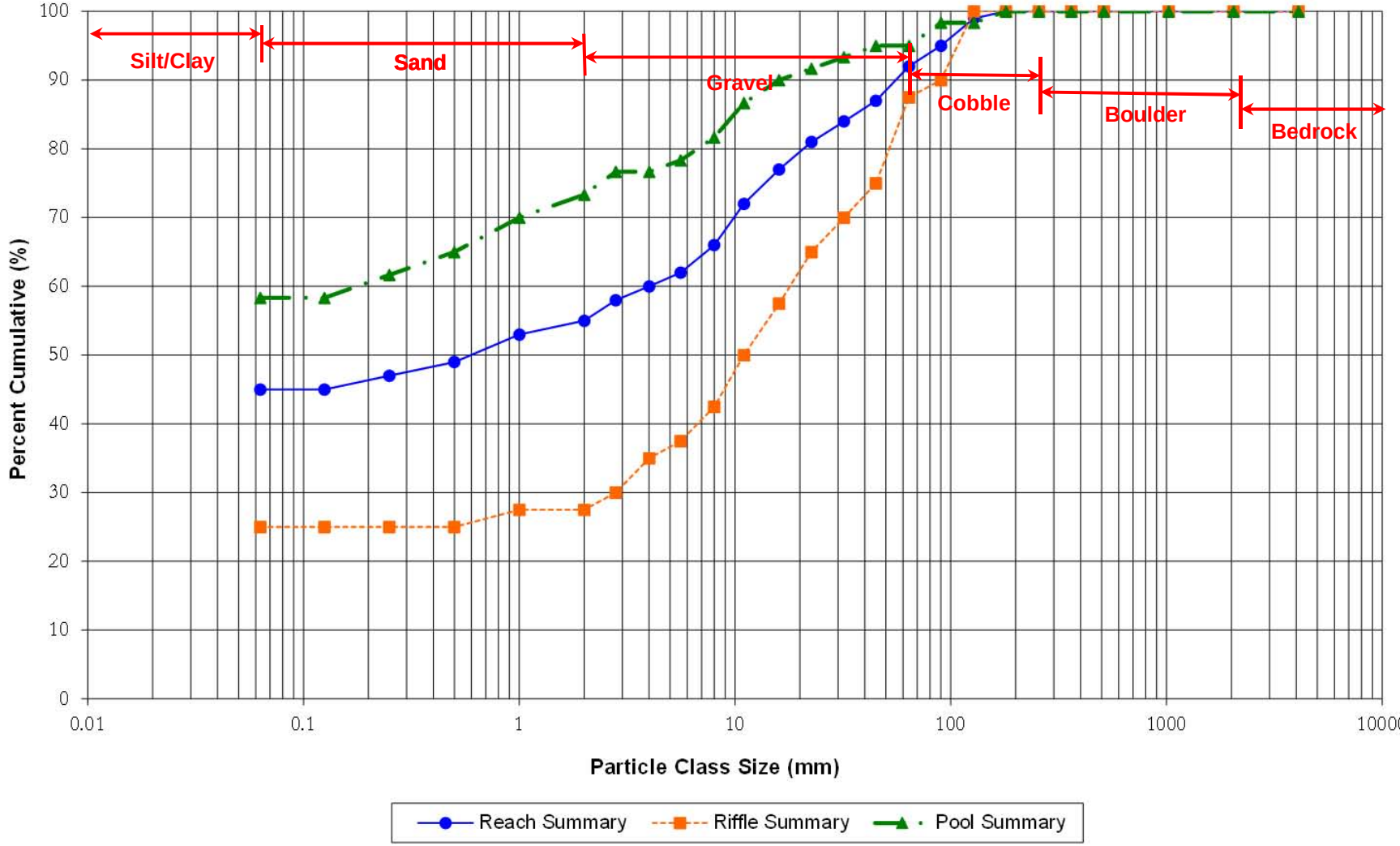
Project Name:	Norkett Branch	**Data Collected By:**	JK, IE
Location:	Union County, NC	**Data Collected On:**	8/27/2012
Job #:	005-02134	**Reach:**	UT2A
Date:	9/18/2012	**Cross Section #:**	n/a

Particle Class		Diameter (mm)		Particle Count			Riffle Summary		Pool Summary		Reach Summary	
		min	max	Riffle	Pool	Total	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative
SILT/CLAY	Silt/Clay	0.000	0.062	10	35	45	25.0	25	58	58	45	45
SAND	Very fine	0.062	0.125					25		58		45
	Fine	0.125	0.250		2	2		25	3	62	2	47
	Medium	0.250	0.500		2	2		25	3	65	2	49
	Coarse	0.5	1.0	1	3	4	2.5	28	5	70	4	53
	Very Coarse	1.0	2.0		2	2		28	3	73	2	55
GRAVEL	Very Fine	2.0	2.8	1	2	3	2.5	30	3	77	3	58
	Very Fine	2.8	4.0	2		2	5.0	35		77	2	60
	Fine	4.0	5.7	1	1	2	2.5	38	2	78	2	62
	Fine	5.7	8.0	2	2	4	5.0	43	3	82	4	66
	Medium	8.0	11.3	3	3	6	7.5	50	5	87	6	72
	Medium	11.3	16.0	3	2	5	7.5	58	3	90	5	77
	Coarse	16.0	22.6	3	1	4	7.5	65	2	92	4	81
	Coarse	22.6	32	2	1	3	5.0	70	2	93	3	84
	Very Coarse	32	45	2	1	3	5.0	75	2	95	3	87
	Very Coarse	45	64	5		5	12.5	88		95	5	92
COBBLE	Small	64	90	1	2	3	2.5	90	3	98	3	95
	Small	90	128	4		4	10.0	100		98	4	99
	Large	128	180		1	1		100	2	100	1	100
	Large	180	256					100		100		100
BOULDER	Small	256	362					100		100		100
	Small	362	512					100		100		100
	Medium	512	1024					100		100		100
	Large/Very Large	1024	2048					100		100		100
BEDROCK	Bedrock	2048	>2048					100		100		100
			Total	**40**	**60**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Largest Particle (mm): _____

Riffle Channel materials (mm)		Pool Channel materials		Cumulative Channel materials	
D_{16} =	Silt/Clay	D_{16} =	Silt/Clay	D_{16} =	Silt/Clay
D_{35} =	4.00	D_{35} =	Silt/Clay	D_{35} =	Silt/Clay
D_{50} =	11.00	D_{50} =	Silt/Clay	D_{50} =	0.59
D_{84} =	57.99	D_{84} =	9.28	D_{84} =	32.00
D_{95} =	107.33	D_{95} =	64.00	D_{95} =	90.00
D_{100} =	128	D_{99} =	180	D_{99} =	180

UT2A
Reach-Wide Pebble Count Particle Distribution



PEBBLE COUNT ANALYSIS WORKSHEET

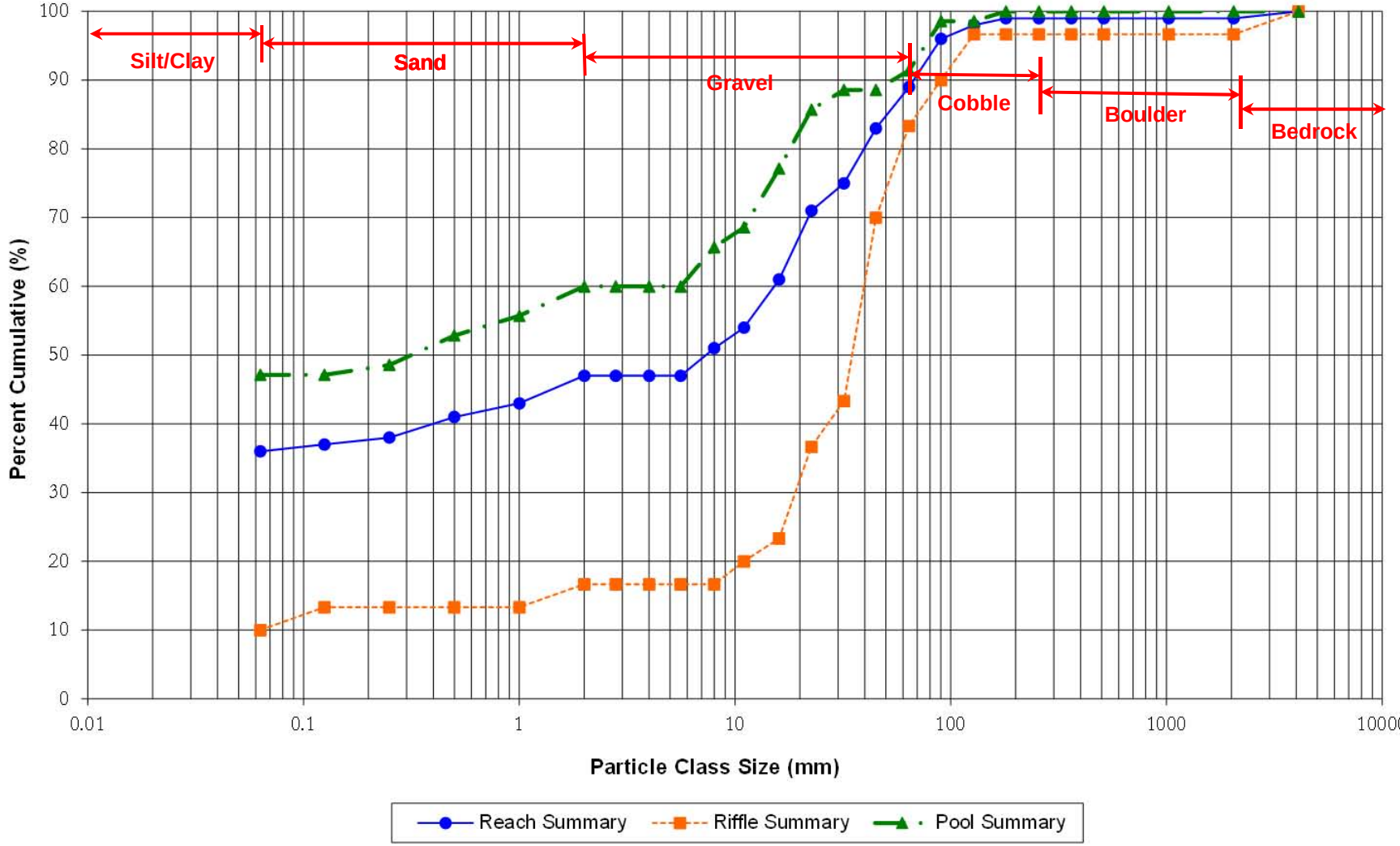
Project Name:	Norkett Branch	**Data Collected By:**	JK, IE
Location:	Union County, NC	**Data Collected On:**	8/28/2012
Job #:	005-02134	**Reach:**	UT2
Date:	9/18/2012	**Cross Section #:**	n/a

Particle Class		Diameter (mm)		Particle Count			Riffle Summary		Pool Summary		Reach Summary	
		min	max	Riffle	Pool	Total	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative
SILT/CLAY	Silt/Clay	0.000	0.062	3	33	36	10.0	10	47	47	36	36
SAND	Very fine	0.062	0.125	1		1	3.3	13		47	1	37
	Fine	0.125	0.250		1	1		13	1	49	1	38
	Medium	0.250	0.500		3	3		13	4	53	3	41
	Coarse	0.5	1.0		2	2		13	3	56	2	43
	Very Coarse	1.0	2.0	1	3	4	3.3	17	4	60	4	47
GRAVEL	Very Fine	2.0	2.8					17		60		47
	Very Fine	2.8	4.0					17		60		47
	Fine	4.0	5.7					17		60		47
	Fine	5.7	8.0		4	4		17	6	66	4	51
	Medium	8.0	11.3	1	2	3	3.3	20	3	69	3	54
	Medium	11.3	16.0	1	6	7	3.3	23	9	77	7	61
	Coarse	16.0	22.6	4	6	10	13.3	37	9	86	10	71
	Coarse	22.6	32	2	2	4	6.7	43	3	89	4	75
	Very Coarse	32	45	8		8	26.7	70		89	8	83
	Very Coarse	45	64	4	2	6	13.3	83	3	91	6	89
COBBLE	Small	64	90	2	5	7	6.7	90	7	99	7	96
	Small	90	128	2		2	6.7	97		99	2	98
	Large	128	180		1	1		97	1	100	1	99
	Large	180	256					97		100		99
BOULDER	Small	256	362					97		100		99
	Small	362	512					97		100		99
	Medium	512	1024					97		100		99
	Large/Very Large	1024	2048					97		100		99
BEDROCK	Bedrock	2048	>2048	1		1	3.33	100		100	1	100
			Total	**30**	**70**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

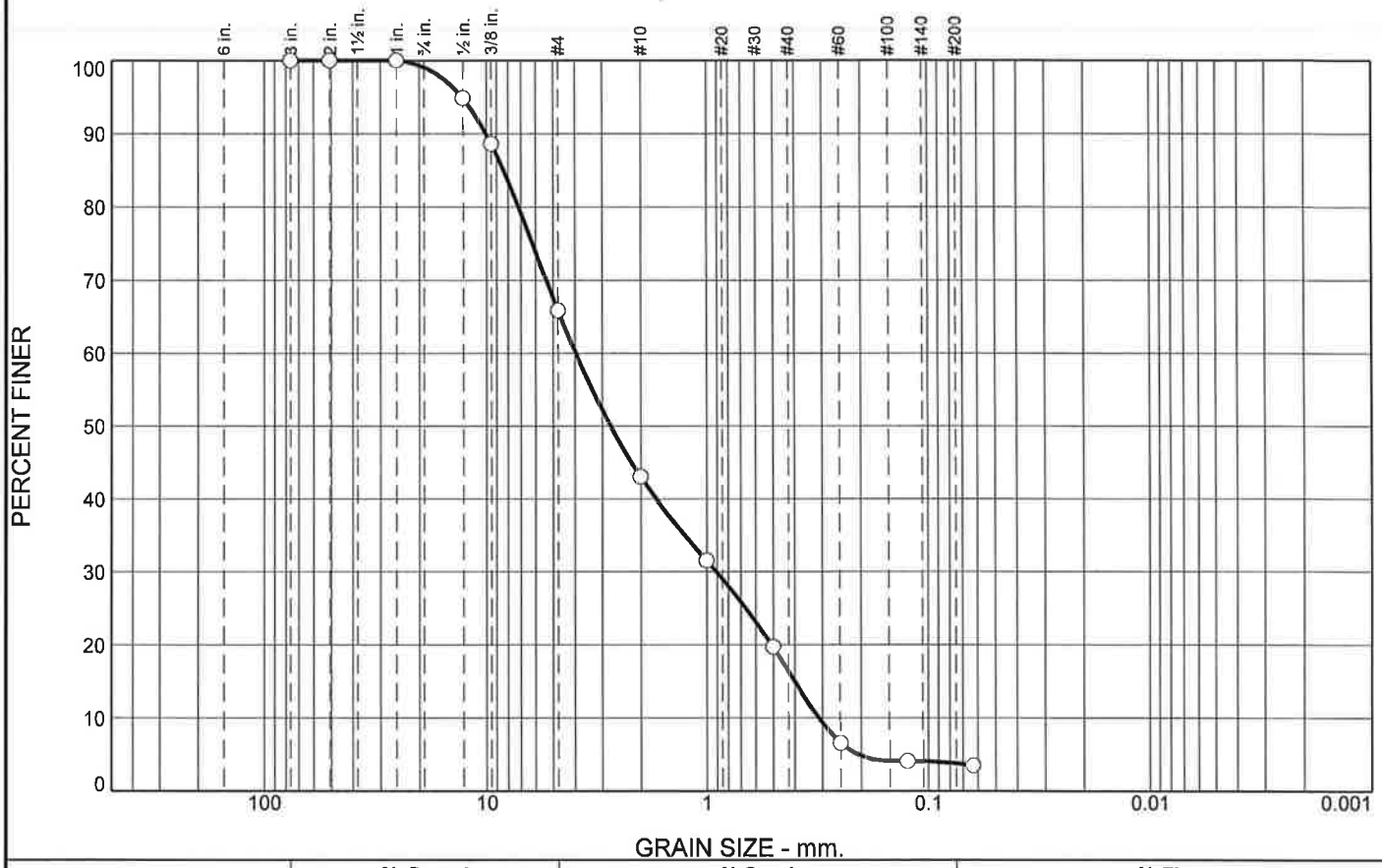
Largest Particle (mm): _____

Riffle Channel materials (mm)		Pool Channel materials		Cumulative Channel materials	
D_{16} =	Silt/Clay	D_{16} =	Silt/Clay	D_{16} =	Silt/Clay
D_{35} =	21.65	D_{35} =	Silt/Clay	D_{35} =	Silt/Clay
D_{50} =	34.85	D_{50} =	0.31	D_{50} =	7.32
D_{84} =	66.22	D_{84} =	21.09	D_{84} =	47.72
D_{95} =	117.21	D_{95} =	75.89	D_{95} =	85.72
D_{100} =	>2048	D_{99} =	180	D_{99} =	>2048

UT2
Reach-Wide Pebble Count Particle Distribution



Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.9	33.2	22.9	26.7	12.5	3.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	100.0		
0.5	94.8		
0.375	88.6		
#4	65.9		
#10	43.0		
#18	31.5		
#35	19.7		
#60	6.6		
#120	4.2		
#230	3.5		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 10.0536 D_{85}= 8.3896 D_{60}= 3.9451
D_{50}= 2.7371 D_{30}= 0.9062 D_{15}= 0.4003
D_{10}= 0.3118 C_u= 12.65 C_c= 0.67

Classification

USCS= SP AASHTO=

Remarks

Dry Weight of Sample: 757.01g
Secondary Axis: 0.86", 0.81"

Location: R1, XS-1, 09-10-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett
Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: R1, XS-1, 09-10-12
Date: 10-10-12
USCS Classification: SP
Testing Remarks: Dry Weight of Sample: 757.01g
Secondary Axis: 0.86", 0.81"
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
757.01	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	0.00	100.0
			0.5	39.28	94.8
			0.375	86.16	88.6
			#4	258.37	65.9
			#10	431.24	43.0
			#18	518.43	31.5
			#35	608.20	19.7
			#60	706.67	6.6
			#120	725.46	4.2
			#230	730.14	3.5

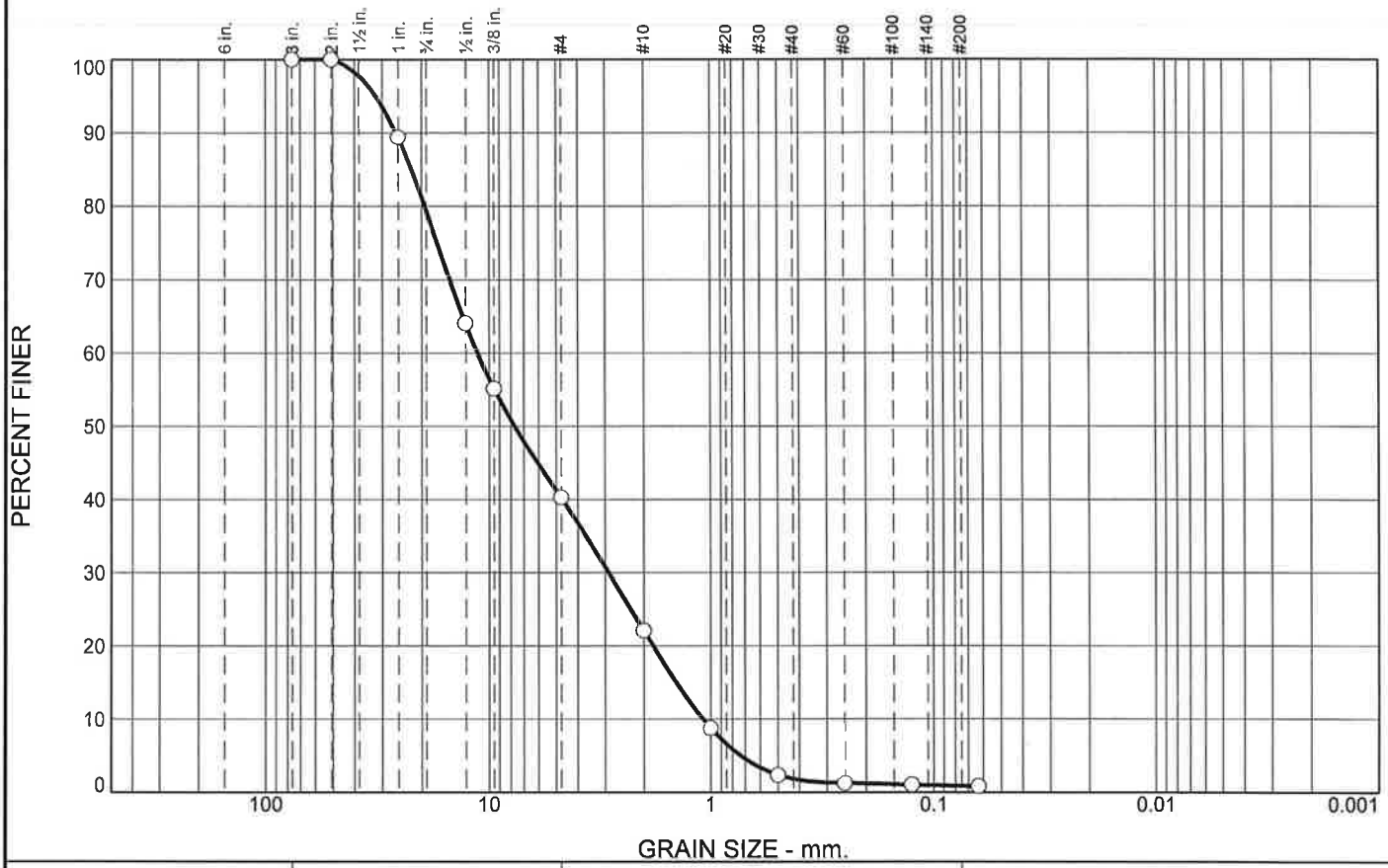
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.9	33.2	34.1	22.9	26.7	12.5	62.1			3.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.3118	0.4003	0.5086	0.9062	2.7371	3.9451	7.1759	8.3896	10.0536	12.8479

Fineness Modulus	C_u	C_c
4.29	12.65	0.67

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	20.6	39.1	18.2	20.3	0.9	0.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	89.4		
0.5	64.0		
0.375	55.1		
#4	40.3		
#10	22.1		
#18	8.8		
#35	2.4		
#60	1.3		
#120	1.0		
#230	0.8		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 25.9767 D_{85}= 22.1796 D_{60}= 11.2559
D_{50}= 7.7132 D_{30}= 2.8893 D_{15}= 1.4266
D_{10}= 1.0834 C_u= 10.39 C_c= 0.68

Classification

USCS= GP AASHTO=

Remarks

Dry Weight of Sample: 955.02g
Secondary Axis: 2.22", 1.83"

Location: R-1, X-5, 08-27-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: R-1, X-5, 08-27-12
Date: 10-10-12
USCS Classification: GP
Testing Remarks: Dry Weight of Sample: 955.02g
Secondary Axis: 2.22", 1.83"
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
955.02	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	101.67	89.4
			0.5	343.78	64.0
			0.375	428.37	55.1
			#4	570.38	40.3
			#10	744.30	22.1
			#18	871.43	8.8
			#35	932.55	2.4
			#60	943.00	1.3
			#120	945.26	1.0
			#230	947.32	0.8

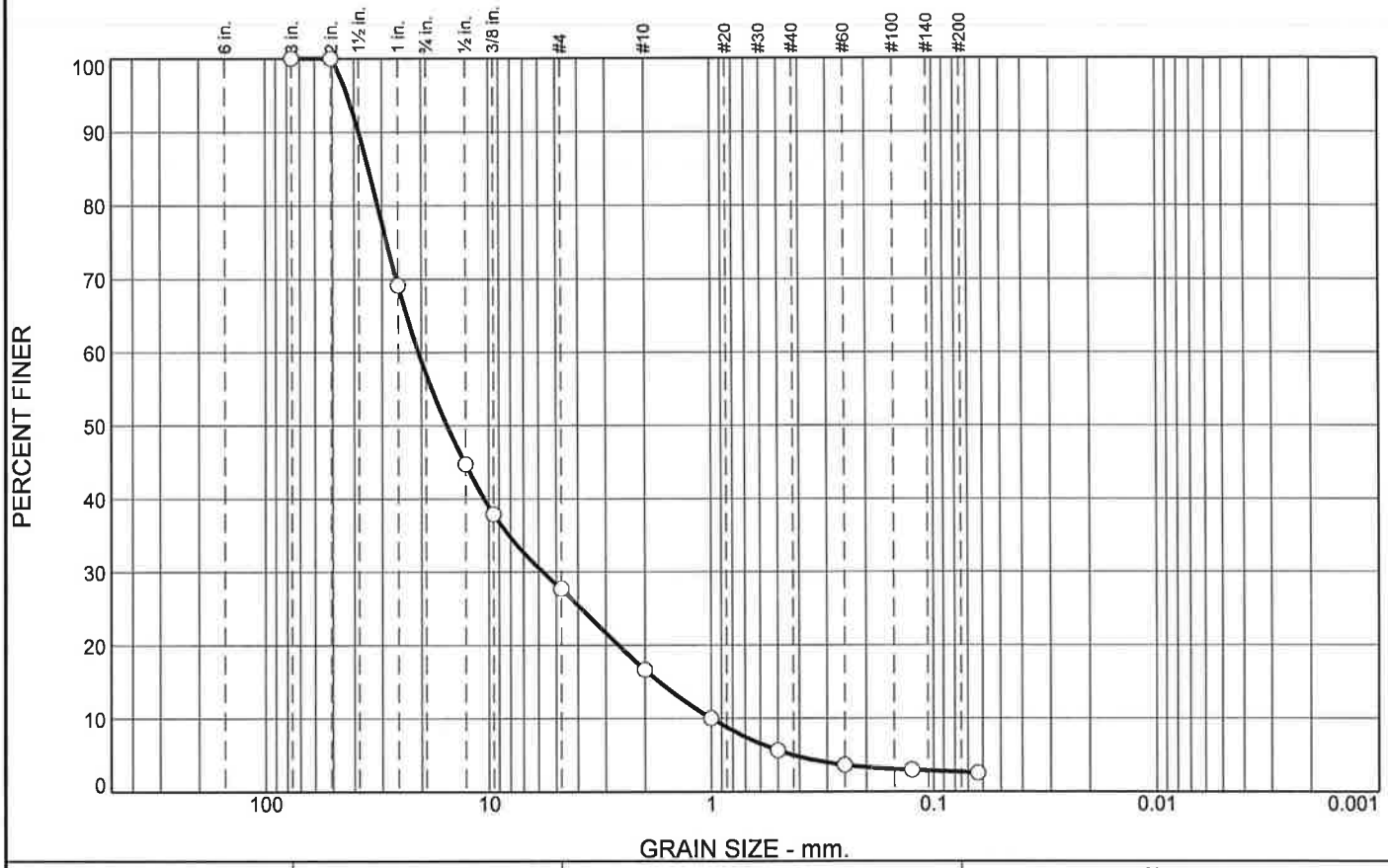
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	20.6	39.1	59.7	18.2	20.3	0.9	39.4			0.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
1.0834	1.4266	1.8166	2.8893	7.7132	11.2559	19.3345	22.1796	25.9767	32.1136

Fineness Modulus	C_u	C_c
5.85	10.39	0.68

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	43.0	29.4	11.0	11.6	2.3	2.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	69.1		
0.5	44.7		
0.375	37.9		
#4	27.6		
#10	16.6		
#18	10.0		
#35	5.6		
#60	3.6		
#120	3.0		
#230	2.5		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 38.0790 D_{85}= 34.4221 D_{60}= 20.6058
D_{50}= 15.3609 D_{30}= 5.7426 D_{15}= 1.7271
D_{10}= 1.0000 C_u= 20.61 C_c= 1.60

Classification

USCS= GW AASHTO=

Remarks

Dry Weight of Sample: 875.58g
Secondary Axis: 3.04", 2.60"

Location: R2, X-7, 08-12-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: R2, X-7, 08-12-12
Date: 10-10-12
USCS Classification: GW
Testing Remarks: Dry Weight of Sample: 875.58g
Secondary Axis: 3.04", 2.60"
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
875.58	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	270.26	69.1
			0.5	484.13	44.7
			0.375	543.70	37.9
			#4	633.62	27.6
			#10	730.10	16.6
			#18	788.02	10.0
			#35	826.39	5.6
			#60	844.01	3.6
			#120	849.67	3.0
			#230	853.30	2.5

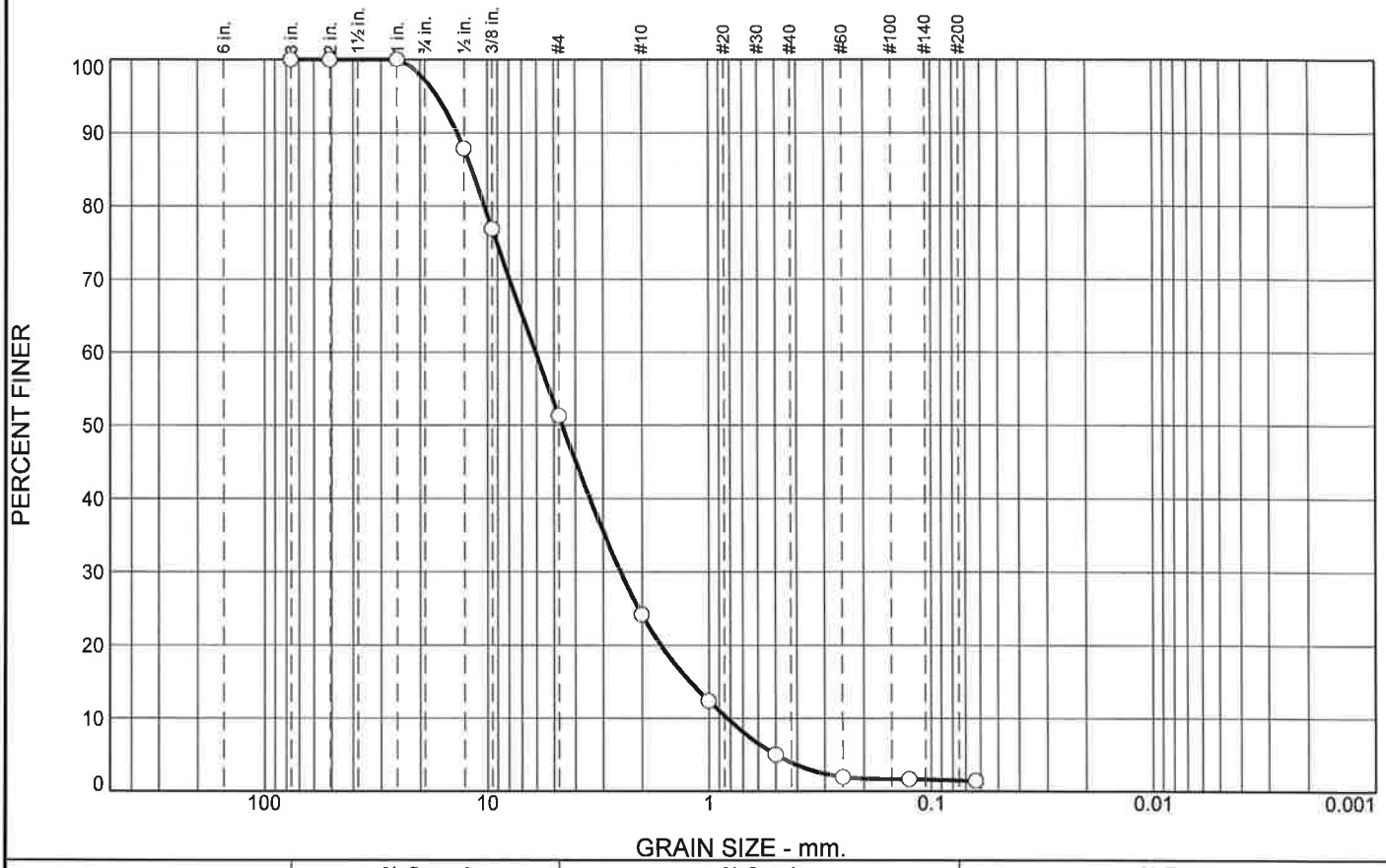
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	43.0	29.4	72.4	11.0	11.6	2.3	24.9			2.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
1.0000	1.7271	2.6402	5.7426	15.3609	20.6058	31.3052	34.4221	38.0790	42.7820

Fineness Modulus	C_u	C_c
6.44	20.61	1.60

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.8	45.9	27.1	20.3	2.4	1.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	100.0		
0.5	87.8		
0.375	76.9		
#4	51.3		
#10	24.2		
#18	12.4		
#35	5.0		
#60	2.0		
#120	1.6		
#230	1.4		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 13.6370 D_{85}= 11.7343 D_{60}= 6.0603
D_{50}= 4.5742 D_{30}= 2.4956 D_{15}= 1.2136
D_{10}= 0.8266 C_u= 7.33 C_c= 1.24

Classification

USCS= SW AASHTO=

Remarks

Dry Weight of Sample: 1173.21g
Secondary Axis: 1.17", 1.47"

Location: R2, XS-9, 08-27-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/17/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: R2, XS-9, 08-27-12
Date: 10-10-12
USCS Classification: SW
Testing Remarks: Dry Weight of Sample: 1173.21g
Secondary Axis: 1.17", 1.47"
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
1173.21	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	0.00	100.0
			0.5	143.45	87.8
			0.375	271.04	76.9
			#4	570.96	51.3
			#10	889.72	24.2
			#18	1028.01	12.4
			#35	1114.77	5.0
			#60	1150.26	2.0
			#120	1154.59	1.6
			#230	1156.64	1.4

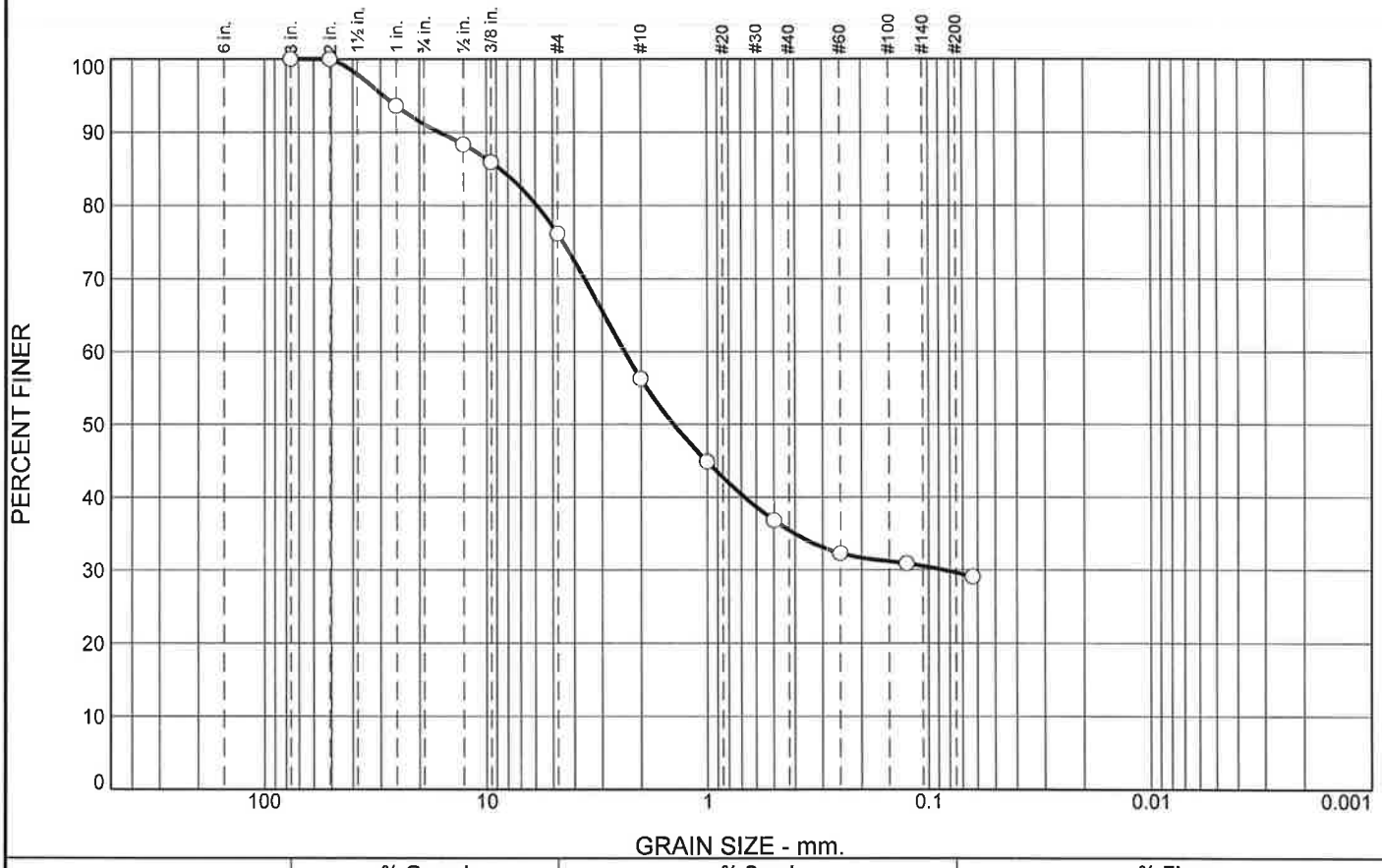
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	2.8	45.9	48.7	27.1	20.3	2.4	49.8			1.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.8266	1.2136	1.6442	2.4956	4.5742	6.0603	10.3027	11.7343	13.6370	16.7239

Fineness Modulus	C_u	C_c
5.21	7.33	1.24

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	8.9	14.9	19.9	20.9	5.8	29.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	93.5		
0.5	88.3		
0.375	85.9		
#4	76.2		
#10	56.3		
#18	44.9		
#35	36.8		
#60	32.3		
#120	30.9		
#230	29.1		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 16.2617 D_{85}= 8.6765 D_{60}= 2.3680
D_{50}= 1.4211 D_{30}= 0.0868 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Dry Weight of Sample: 1737.55g
Secondary Axis: 1.49", 1.59'

Location: UT-1, XS-10, 09-10-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: UT-1, XS-10, 09-10-12
Date: 10-10-12
Testing Remarks: Dry Weight of Sample: 1737.55g
Secondary Axis: 1.49", 1.59'
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
1737.55	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	112.39	93.5
			0.5	203.46	88.3
			0.375	244.58	85.9
			#4	414.12	76.2
			#10	760.03	56.3
			#18	957.92	44.9
			#35	1098.01	36.8
			#60	1176.67	32.3
			#120	1201.47	30.9
			#230	1232.41	29.1

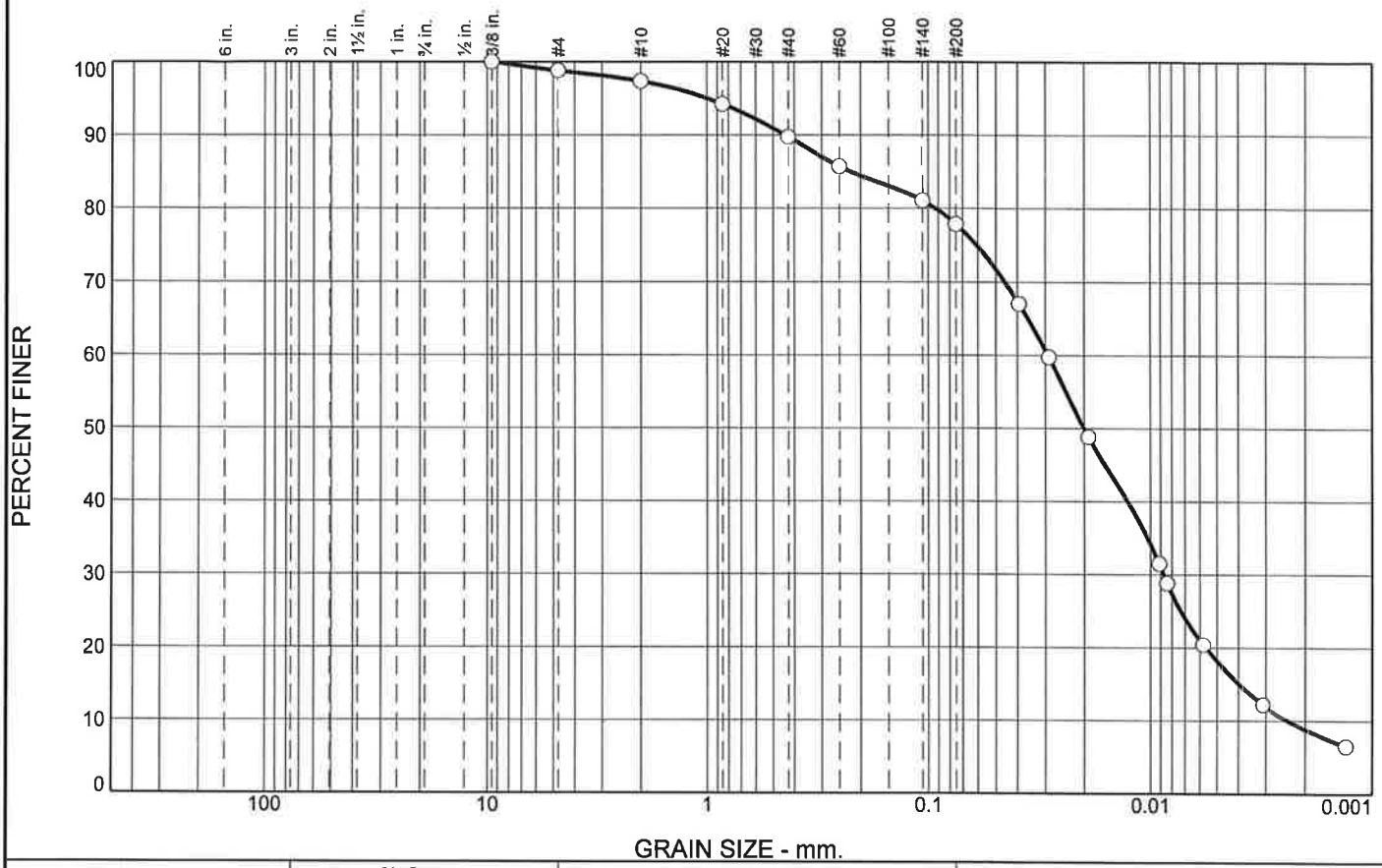
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	8.9	14.9	23.8	19.9	20.9	5.8	46.6			29.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0868	1.4211	2.3680	5.8953	8.6765	16.2617	29.2011

Fineness Modulus
3.39

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.2	1.5	7.6	11.8	59.8	18.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375	100.0		
#4	98.8		
#10	97.3		
#20	94.2		
#40	89.7		
#60	85.7		
#140	81.0		
#200	77.9		

* (no specification provided)

Material Description

Grey Sandy Clayey SILT

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.4394 D_{85}= 0.2228 D_{60}= 0.0291
D_{50}= 0.0200 D_{30}= 0.0087 D_{15}= 0.0040
D_{10}= 0.0024 C_u= 12.13 C_c= 1.09

Classification

USCS= AASHTO=

Remarks

Location: UT-1, XS-13, 09-10-12

Date: 10-17-2012

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/17/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: UT-1, XS-13, 09-10-12
Material Description: Grey Sandy Clayey SILT
Date: 10-17-2012
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
145.10	0.00	0.00	0.375	0.00	100.0
			#4	1.77	98.8
			#10	3.85	97.3
52.88	0.00	0.00	#20	1.70	94.2
			#40	4.13	89.7
			#60	6.33	85.7
			#140	8.86	81.0
			#200	10.57	77.9

Hydrometer Test Data

Hydrometer test uses material passing#10
Percent passing #10 based upon complete sample =97.3
Weight of hydrometer sample =52.88
Table of composite correction values:

Temp., deg. C:	27.6	25.9	21.8	20.5
Comp. corr.:	-4.0	-4.5	-5.5	-6.0

Meniscus correction only =1.0
Specific gravity of solids =2.70
Hydrometer type =152H
Hydrometer effective depth equation: L =16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.1	42.0	36.8	0.0129	43.0	9.2	0.0394	67.0
2.00	23.1	38.0	32.8	0.0129	39.0	9.9	0.0288	59.7
5.00	23.1	32.0	26.8	0.0129	33.0	10.9	0.0191	48.8
25.00	23.0	22.5	17.3	0.0130	23.5	12.4	0.0091	31.5
30.00	23.1	21.0	15.8	0.0129	22.0	12.7	0.0084	28.8
68.00	22.7	16.5	11.2	0.0130	17.5	13.4	0.0058	20.4
250.00	22.6	12.0	6.7	0.0130	13.0	14.2	0.0031	12.2
1440.00	22.1	9.0	3.6	0.0131	10.0	14.7	0.0013	6.5

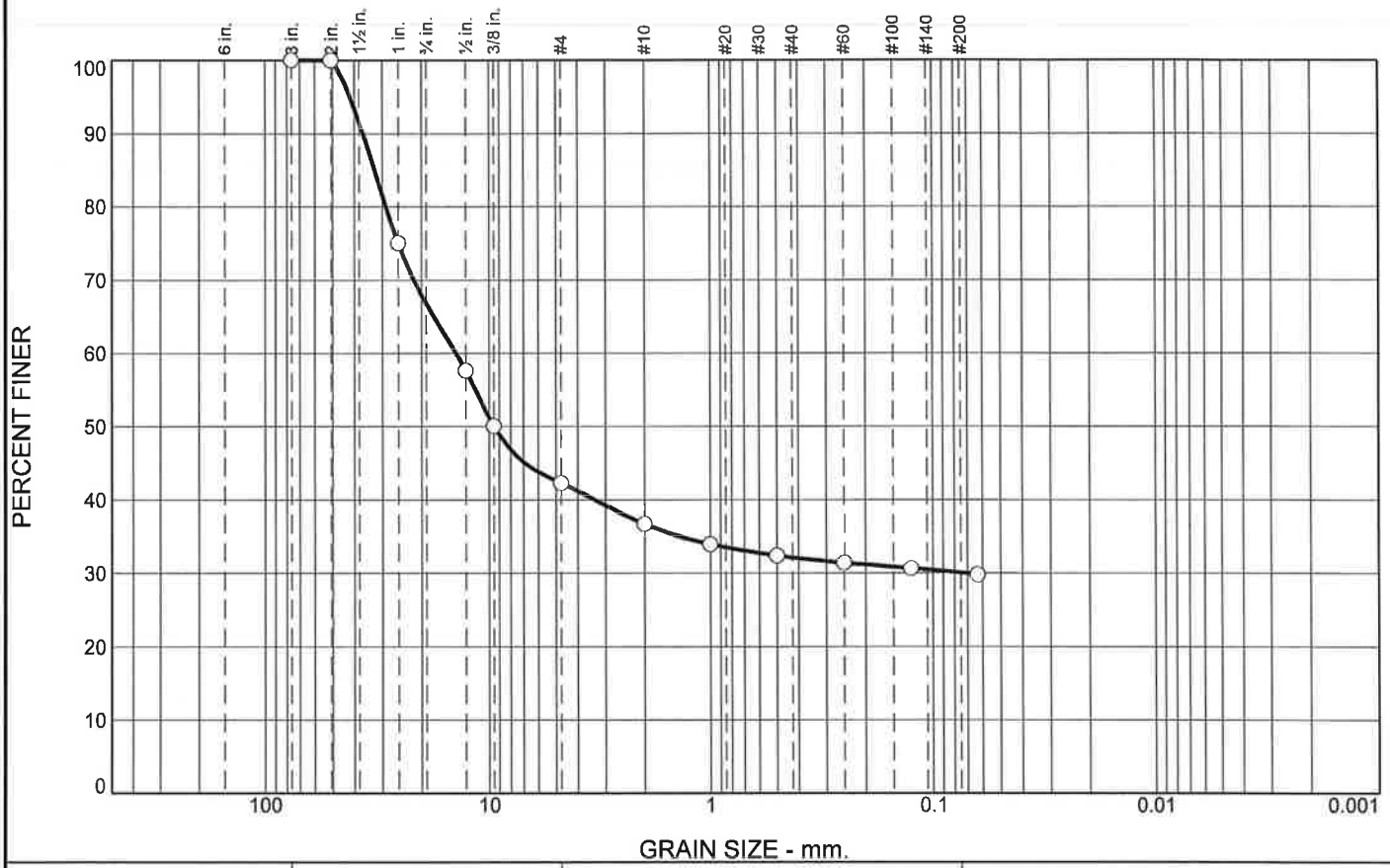
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	1.2	1.2	1.5	7.6	11.8	20.9	59.8	18.1	77.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0024	0.0040	0.0056	0.0087	0.0200	0.0291	0.0926	0.2228	0.4394	0.9991

Fineness Modulus	C_u	C_c
0.46	12.13	1.09

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	33.3	24.4	5.6	4.6	2.1	30.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	75.0		
0.5	57.6		
0.375	50.1		
#4	42.3		
#10	36.7		
#18	33.9		
#35	32.4		
#60	31.4		
#120	30.7		
#230	29.8		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 36.6447 D_{85}= 32.5374 D_{60}= 14.0496
D_{50}= 9.5005 D_{30}= 0.0733 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Dry Weight of Sample: 522.51g
Secondary Axis: 3", 1.95"

Location: UT-2, XS-14, 08-27-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: UT-2, XS-14, 08-27-12
Date: 10-10-12
Testing Remarks: Dry Weight of Sample: 522.51g
Secondary Axis: 3", 1.95"
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
522.51	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	130.80	75.0
			0.5	221.71	57.6
			0.375	260.95	50.1
			#4	301.58	42.3
			#10	330.97	36.7
			#18	345.22	33.9
			#35	353.30	32.4
			#60	358.63	31.4
			#120	362.36	30.7
			#230	366.80	29.8

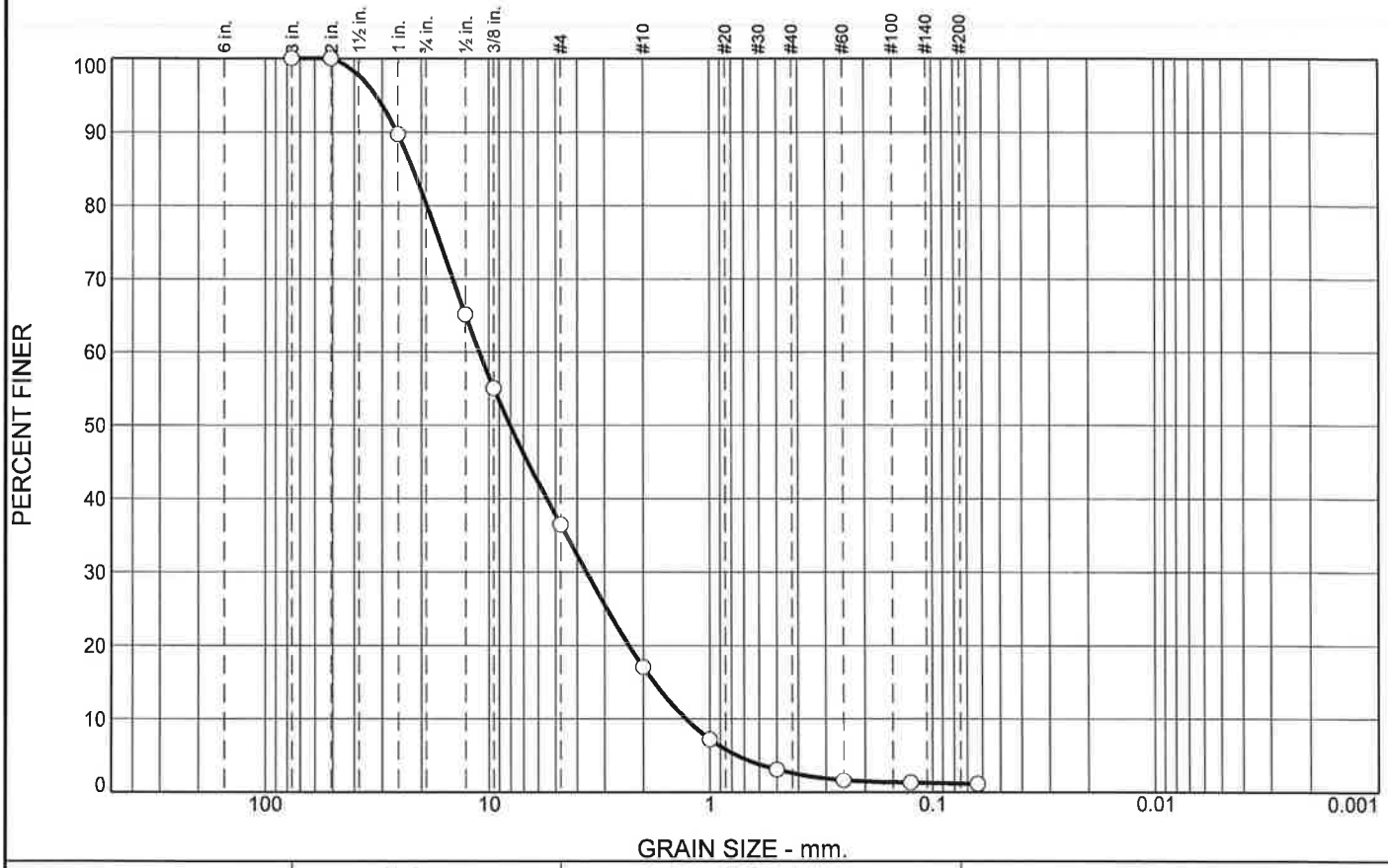
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	33.3	24.4	57.7	5.6	4.6	2.1	12.3			30.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0733	9.5005	14.0496	28.9169	32.5374	36.6447	41.8410

Fineness Modulus
4.82

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	19.7	43.8	19.5	14.4	1.4	1.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	89.6		
0.5	65.1		
0.375	55.0		
#4	36.5		
#10	17.0		
#18	7.2		
#35	3.1		
#60	1.6		
#120	1.3		
#230	1.1		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 25.7658 D_{85}= 21.8209 D_{60}= 11.0417
D_{50}= 8.0555 D_{30}= 3.6264 D_{15}= 1.7919
D_{10}= 1.2877 C_u= 8.57 C_c= 0.92

Classification

USCS= GP AASHTO=

Remarks

Dry Weight of Sample: 762.35g
Secondary Axis: 2.63", 1.82"

Location: UT2, XS-16, 08-27-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: UT2, XS-16, 08-27-12
Date: 10-10-12
USCS Classification: GP
Testing Remarks: Dry Weight of Sample: 762.35g
Secondary Axis: 2.63", 1.82"
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
762.35	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	79.21	89.6
			0.5	266.42	65.1
			0.375	342.69	55.0
			#4	483.97	36.5
			#10	632.84	17.0
			#18	707.73	7.2
			#35	739.01	3.1
			#60	749.96	1.6
			#120	752.53	1.3
			#230	753.85	1.1

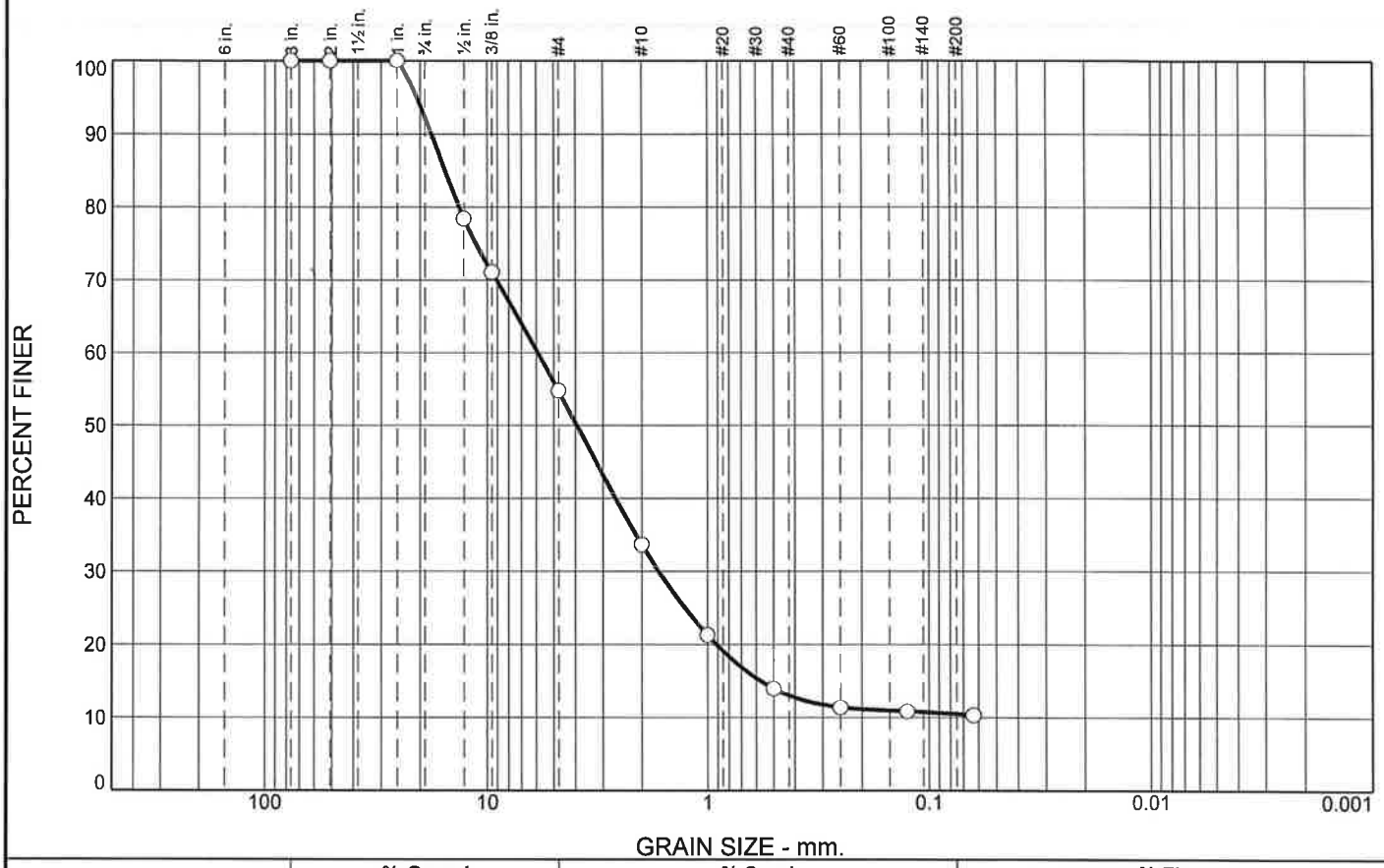
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	19.7	43.8	63.5	19.5	14.4	1.4	35.3			1.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
1.2877	1.7919	2.3285	3.6264	8.0555	11.0417	18.8876	21.8209	25.7658	32.1052

Fineness Modulus	C_u	C_c
5.94	8.57	0.92

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	7.7	37.6	21.1	20.6	2.5	10.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	100.0		
0.5	78.3		
0.375	71.1		
#4	54.7		
#10	33.6		
#18	21.3		
#35	13.9		
#60	11.4		
#120	10.8		
#230	10.3		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 17.8130 D_{85}= 15.4974 D_{60}= 5.9094
D_{50}= 3.9355 D_{30}= 1.6789 D_{15}= 0.5749
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Dry Weight of Sample: 1037.61g
Secondary Axis: 2.10", 1.86"

Location: UT-2, XS-19, 08-28-12

Date: 10-10-19

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett
Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: UT-2, XS-19, 08-28-12
Date: 10-10-19
Testing Remarks: Dry Weight of Sample: 1037.61g
Secondary Axis: 2.10", 1.86"
Tested by: Mimi Hourani

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
1037.61	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	0.00	100.0
			0.5	224.87	78.3
			0.375	300.08	71.1
			#4	469.93	54.7
			#10	688.82	33.6
			#18	816.88	21.3
			#35	892.93	13.9
			#60	919.42	11.4
			#120	925.09	10.8
			#230	930.79	10.3

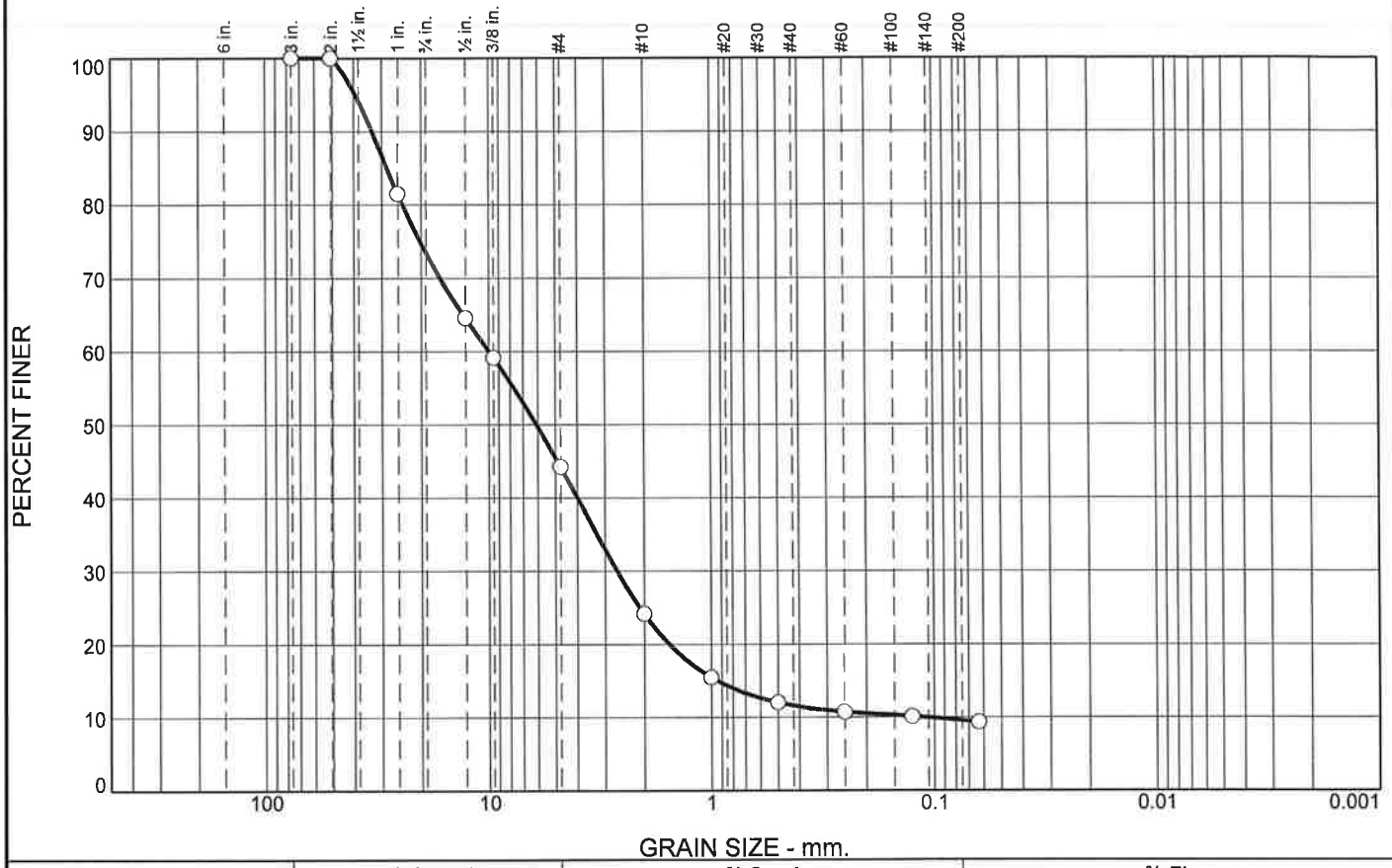
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	7.7	37.6	45.3	21.1	20.6	2.5	44.2			10.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.5749	0.9114	1.6789	3.9355	5.9094	13.4006	15.4974	17.8130	20.6967

Fineness Modulus
4.83

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	26.5	29.2	20.2	12.5	2.1	9.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3	100.0		
2	100.0		
1	81.5		
0.5	64.6		
0.375	59.2		
#4	44.3		
#10	24.1		
#18	15.5		
#35	12.0		
#60	10.7		
#120	10.1		
#230	9.3		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 33.1533 D_{85}= 28.3922 D_{60}= 9.9623
D_{50}= 6.0885 D_{30}= 2.6463 D_{15}= 0.9406
D_{10}= 0.1142 C_u= 87.23 C_c= 6.15

Classification

USCS= AASHTO=

Remarks

Dry Weight of Sample: 474.54g
Secondary Axis: 3.09", 1.92"

Location: UT2A, XS-20, 08-27-12

Date: 10-10-12

Summit Engineering

Ft. Mill, South Carolina

Client: Wildlands Engineering Inc.
Project: Norkett

Project No: SL-262-11 **Figure**

Tested By: Mimi Hourani

GRAIN SIZE DISTRIBUTION TEST DATA

10/12/2012

Client: Wildlands Engineering Inc.
Project: Norkett
Project Number: SL-262-11
Location: UT2A, XS-20, 08-27-12
Date: 10-10-12
Testing Remarks: Dry Weight of Sample: 474.54g
Secondary Axis: 3.09", 1.92"
Tested by: Mimi Hourani

Sieve Test Data

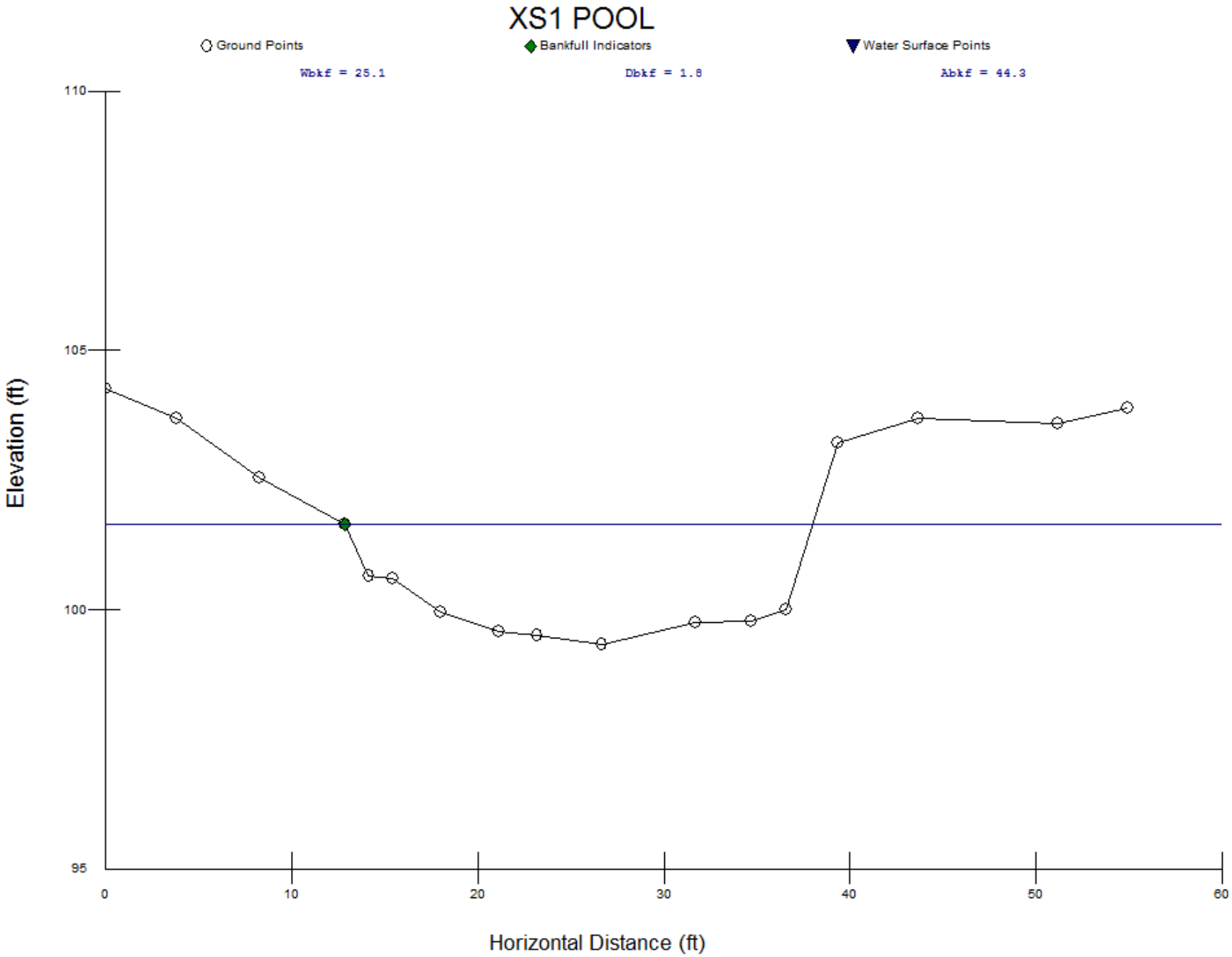
Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
474.54	0.00	0.00	3	0.00	100.0
			2	0.00	100.0
			1	87.95	81.5
			0.5	168.18	64.6
			0.375	193.82	59.2
			#4	264.38	44.3
			#10	360.01	24.1
			#18	401.19	15.5
			#35	417.54	12.0
			#60	423.75	10.7
			#120	426.67	10.1
			#230	430.38	9.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	26.5	29.2	55.7	20.2	12.5	2.1	34.8			9.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1142	0.9406	1.5438	2.6463	6.0885	9.9623	24.1978	28.3922	33.1533	39.3032

Fineness Modulus	C_u	C_c
5.51	87.23	6.15


XS1 POOL
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 25.1
Dbkf = 1.8
Abkf = 44.3
110
105
100
95
Elevation (ft)
0
10
20
30
40
50
60
Horizontal Distance (ft)

XS1 Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Dutchman Reference
Reach Name: Reach 1
Cross Section Name: XS1 POOL
Survey Date: 10/11/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	104.258	
3.83	0	103.681	
8.3	0	102.537	
12.87	0	101.648	BKF
14.16	0	100.646	
15.42	0	100.61	
17.99	0	99.953	
21.11	0	99.585	
23.19	0	99.491	
26.67	0	99.33	
31.72	0	99.751	
34.67	0	99.769	
36.57	0	100.002	
39.32	0	103.207	
43.63	0	103.692	
51.18	0	103.591	
54.89	0	103.881	

Cross Sectional Geometry

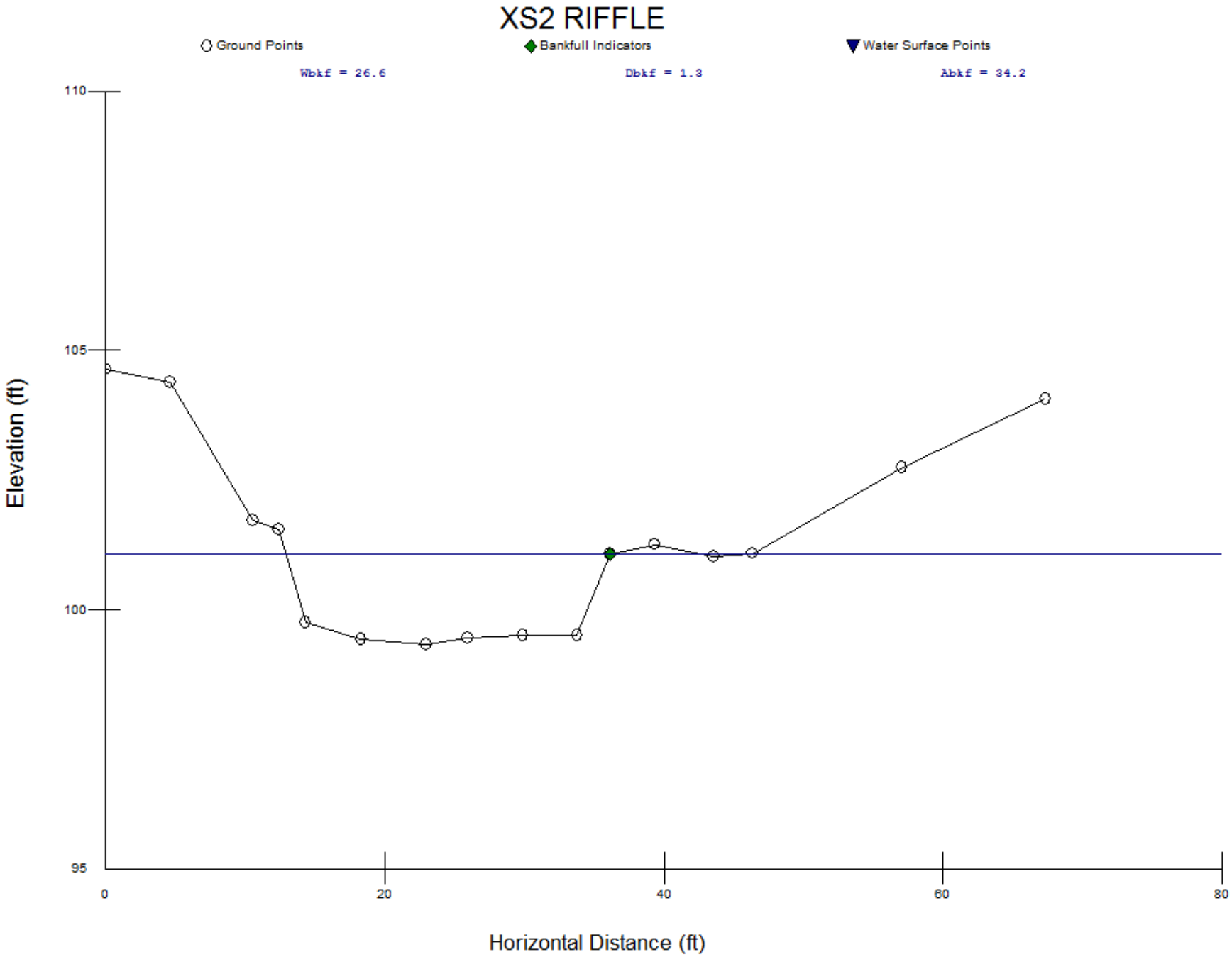
	Channel	Left	Right
Floodprone Elevation (ft)	103.97	103.97	103.97
Bankfull Elevation (ft)	101.65	101.65	101.65
Floodprone Width (ft)	52.98	-----	-----
Bankfull Width (ft)	25.12	12.56	12.56
Entrenchment Ratio	2.11	-----	-----
Mean Depth (ft)	1.76	1.64	1.88
Maximum Depth (ft)	2.32	2.26	2.32
Width/Depth Ratio	14.26	7.64	6.68
Bankfull Area (sq ft)	44.25	20.64	23.61
Wetted Perimeter (ft)	26.37	15.28	15.62
Hydraulic Radius (ft)	1.68	1.35	1.51
Begin BKF Station	12.86	12.86	25.42
End BKF Station	37.98	25.42	37.98

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			

Shear Stress (lb/sq ft)
Movable Particle (mm)


XS2 RIFFLE
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 26.6
Dbkf = 1.3
Abkf = 34.2
110
105
100
95
Elevation (ft)
0
20
40
60
80
Horizontal Distance (ft)

XS2 Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Dutchman Reference
Reach Name: Reach 1
Cross Section Name: XS2 RIFFLE
Survey Date: 10/11/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	104.634	
4.65	0	104.379	
10.61	0	101.731	FIELD BKF
12.43	0	101.536	
14.35	0	99.758	
18.32	0	99.434	
22.97	0	99.316	
25.96	0	99.454	
29.9	0	99.501	
33.79	0	99.51	
36.13	0	101.08	BKF OFFICE
39.36	0	101.257	
43.59	0	101.028	
46.34	0	101.086	
57.05	0	102.749	
67.33	0	104.072	

Cross Sectional Geometry

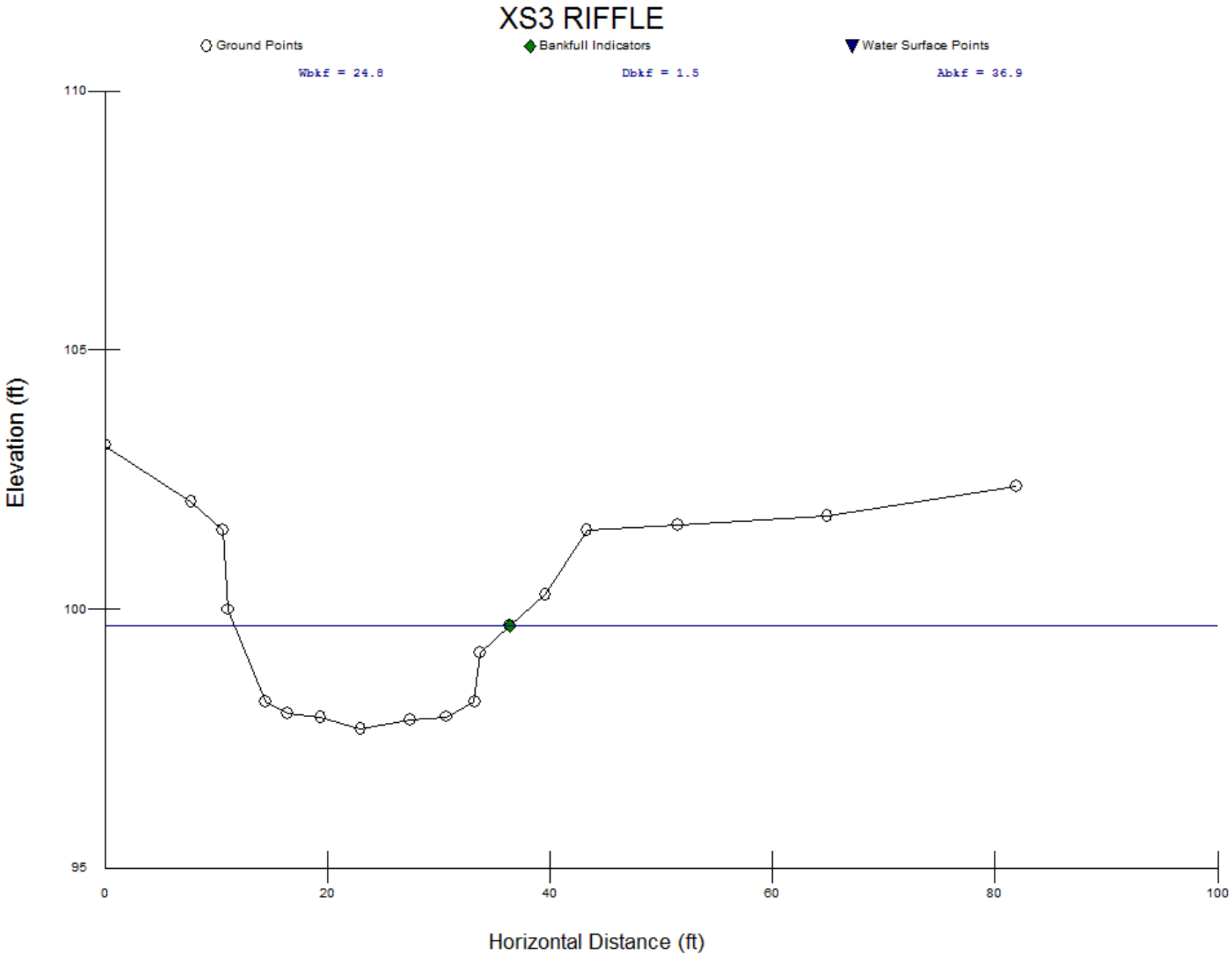
	Channel	Left	Right
Floodprone Elevation (ft)	102.84	102.84	102.84
Bankfull Elevation (ft)	101.08	101.08	101.08
Floodprone Width (ft)	49.68	-----	-----
Bankfull Width (ft)	26.63	17.63	15.51
Entrenchment Ratio	1.87	-----	-----
Mean Depth (ft)	1.28	1.54	0.78
Maximum Depth (ft)	1.76	1.76	1.58
Width/Depth Ratio	20.74	11.44	11.55
Bankfull Area (sq ft)	34.2	27.17	7.02
Wetted Perimeter (ft)	27.65	19.74	11.06
Hydraulic Radius (ft)	1.24	1.38	0.63
Begin BKF Station	12.92	12.92	30.55
End BKF Station	46.06	30.55	46.06

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side
Slope			
Shear Stress (lb/sq ft)			

Movable Particle (mm)


XS3 RIFFLE
Ground Points
Bankfull Indicators
Water Surface Points
Wbkf = 24.8
Dbkf = 1.5
Abkf = 36.9
110
105
100
95
Elevation (ft)
0
20
40
60
80
100
Horizontal Distance (ft)

XS3 Report
RIVERMORPH CROSS SECTION SUMMARY

River Name: Dutchman Reference
Reach Name: Reach 1
Cross Section Name: XS3 RIFFLE
Survey Date: 10/11/12

Cross Section Data Entry

BM Elevation: 0 ft
Backsight Rod Reading: 0 ft

TAPE	FS	ELEV	NOTE
0	0	103.154	
7.76	0	102.062	
10.58	0	101.525	
11.02	0	99.988	
14.46	0	98.197	
16.46	0	97.976	
19.37	0	97.904	
22.96	0	97.673	
27.46	0	97.846	
30.71	0	97.92	
33.2	0	98.196	
33.69	0	99.145	
36.41	0	99.677	BKF
39.58	0	100.278	
43.31	0	101.529	
51.52	0	101.617	
64.89	0	101.785	
81.91	0	102.374	

Cross Sectional Geometry

	Channel	Left	Right
Floodprone Elevation (ft)	101.69	101.69	101.69
Bankfull Elevation (ft)	99.68	99.68	99.68
Floodprone Width (ft)	47.36	-----	-----
Bankfull Width (ft)	24.81	12.41	12.41
Entrenchment Ratio	1.91	-----	-----
Mean Depth (ft)	1.49	1.55	1.42
Maximum Depth (ft)	2.01	2.01	1.97
Width/Depth Ratio	16.69	7.99	8.72
Bankfull Area (sq ft)	36.9	19.26	17.64
Wetted Perimeter (ft)	25.85	14.76	15.02
Hydraulic Radius (ft)	1.43	1.3	1.17
Begin BKF Station	11.61	11.61	24.02
End BKF Station	36.43	24.02	36.43

Entrainment Calculations

Entrainment Formula: Rosgen Modified Shields Curve

	Channel	Left Side	Right Side

Slope
Shear Stress (lb/sq ft)
Movable Particle (mm)

PEBBLE COUNT ANALYSIS WORKSHEET

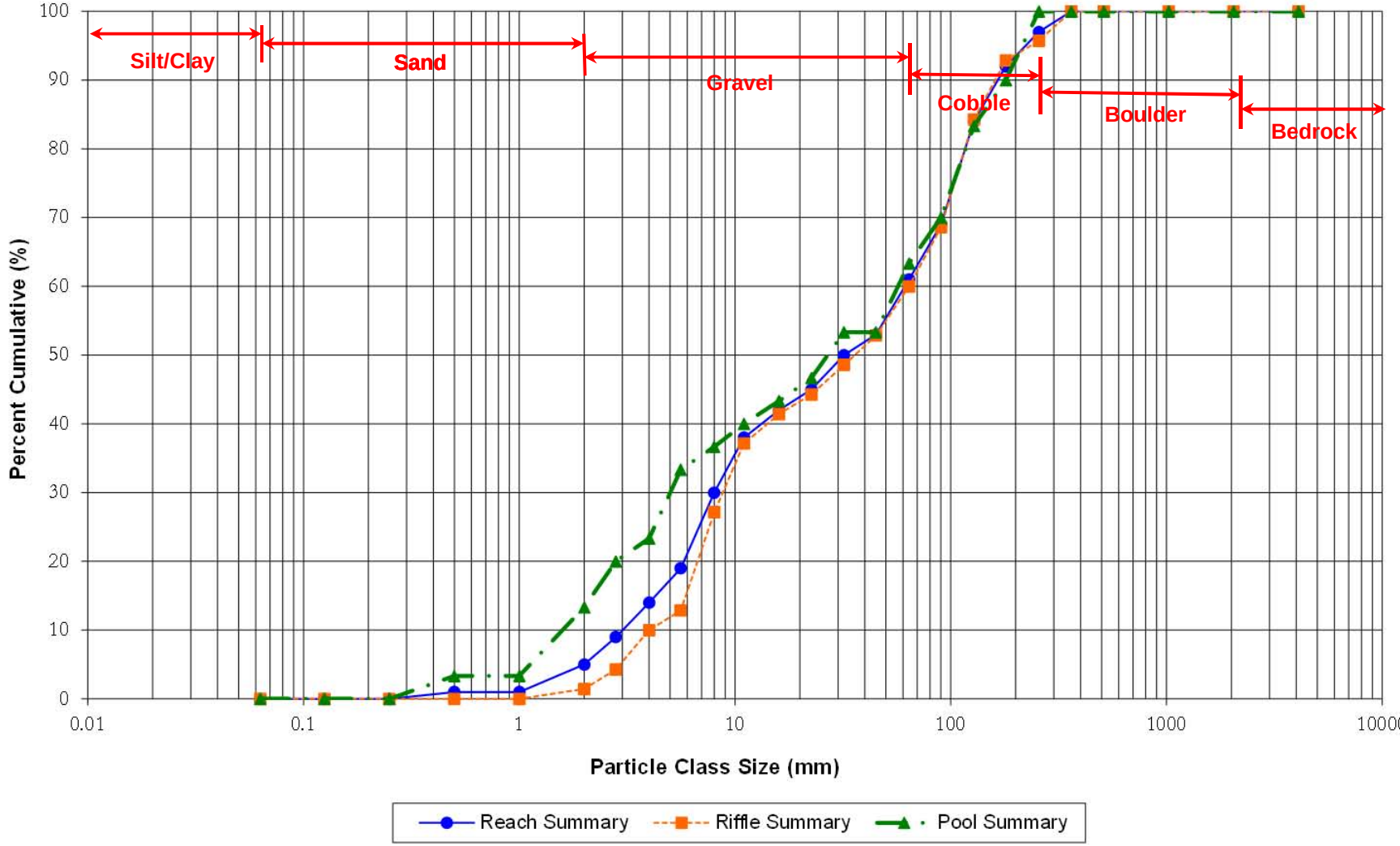
Project Name:	Norkett Branch	**Data Collected By:**	NM, IE
Location:	Union County, NC	**Data Collected On:**	10/4/2012
Job #:	005-02134	**Reach:**	Dutchman Crk Reference Reach
Date:	10/8/2012	**Cross Section #:**	n/a

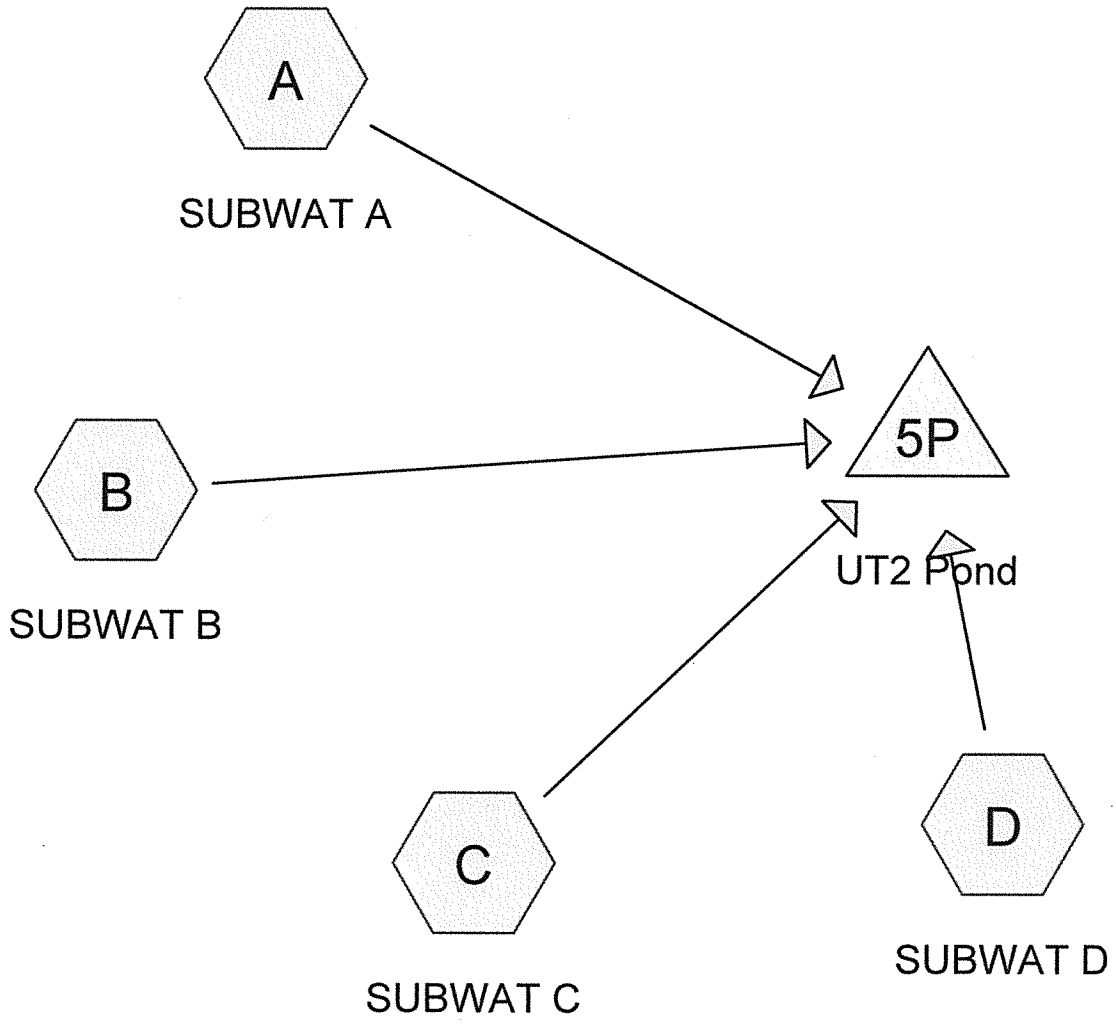
Particle Class		Diameter (mm)		Particle Count			Riffle Summary		Pool Summary		Reach Summary	
		min	max	Riffle	Pool	Total	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative	Class Percentage	Percent Cumulative
SILT/CLAY	Silt/Clay	0.000	0.062					0		0		0
SAND	Very fine	0.062	0.125					0		0		0
	Fine	0.125	0.250					0		0		0
	Medium	0.250	0.500		1	1		0	3	3	1	1
	Coarse	0.5	1.0					0		3		1
	Very Coarse	1.0	2.0	1	3	4	1.4	1	10	13	4	5
GRAVEL	Very Fine	2.0	2.8	2	2	4	2.9	4	7	20	4	9
	Very Fine	2.8	4.0	4	1	5	5.7	10	3	23	5	14
	Fine	4.0	5.7	2	3	5	2.9	13	10	33	5	19
	Fine	5.7	8.0	10	1	11	14.3	27	3	37	11	30
	Medium	8.0	11.3	7	1	8	10.0	37	3	40	8	38
	Medium	11.3	16.0	3	1	4	4.3	41	3	43	4	42
	Coarse	16.0	22.6	2	1	3	2.9	44	3	47	3	45
	Coarse	22.6	32	3	2	5	4.3	49	7	53	5	50
	Very Coarse	32	45	3		3	4.3	53		53	3	53
	Very Coarse	45	64	5	3	8	7.1	60	10	63	8	61
COBBLE	Small	64	90	6	2	8	8.6	69	7	70	8	69
	Small	90	128	11	4	15	15.7	84	13	83	15	84
	Large	128	180	6	2	8	8.6	93	7	90	8	92
	Large	180	256	2	3	5	2.9	96	10	100	5	97
BOULDER	Small	256	362	3		3	4.3	100		100	3	100
	Small	362	512					100		100		100
	Medium	512	1024					100		100		100
	Large/Very Large	1024	2048					100		100		100
BEDROCK	Bedrock	2048	>2048					100		100		100
			Total	**70**	**30**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Largest Particle (mm): _____

Riffle Channel materials (mm)		Pool Channel materials		Cumulative Channel materials	
D_{16} =	6.20	D_{16} =	2.29	D_{16} =	4.58
D_{35} =	10.27	D_{35} =	6.69	D_{35} =	9.76
D_{50} =	35.85	D_{50} =	26.89	D_{50} =	32.00
D_{84} =	127.18	D_{84} =	132.44	D_{84} =	128.00
D_{95} =	234.42	D_{95} =	214.66	D_{95} =	222.36
D_{100} =	362	D_{99} =	256	D_{99} =	362

Dutchman Creek Reference Reach
Reach-Wide Pebble Count Particle Distribution





Subcat Reach Pond Link

Routing Diagram for NBUT2

Prepared by HydroCAD SAMPLER 1-800-927-7246 www.hydrocad.net, Printed 4/29/2013

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
39.000	58	FOREST WITH SOME ROW CROP AG (A)
30.100	66	FORESTED AND ROW CROP AG (D)
55.400	65	FORESTED, ROW CROP AG, LOW DENSITY RES (B)
23.300	61	PASTURE, FORESTED, FARMSTEAD (C)
5.850	100	POND WS (D)
153.650	**64**	**TOTAL AREA**

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
153.650	Other	A, B, C, D
153.650		**TOTAL AREA**

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover
0.000	0.000	0.000	0.000	39.000	39.000	FOREST WITH SOME ROW CROP AG
0.000	0.000	0.000	0.000	30.100	30.100	FORESTED AND ROW CROP AG
0.000	0.000	0.000	0.000	55.400	55.400	FORESTED, ROW CROP AG, LOW DENSITY RES
0.000	0.000	0.000	0.000	23.300	23.300	PASTURE, FORESTED, FARMSTEAD
0.000	0.000	0.000	0.000	5.850	5.850	POND WS
0.000	**0.000**	**0.000**	**0.000**	**153.650**	**153.650**	**TOTAL AREA**

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	5P	496.00	495.00	50.0	0.0200	0.025	6.0	0.0	0.0

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Time span=2.00-60.00 hrs, dt=0.05 hrs, 1161 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A: SUBWAT A Runoff Area=39.000 ac 0.00% Impervious Runoff Depth=0.45"
Flow Length=1,200' Tc=48.9 min CN=58 Runoff=6.65 cfs 1.472 af

Subcatchment B: SUBWAT B Runoff Area=55.400 ac 0.00% Impervious Runoff Depth=0.75"
Flow Length=1,650' Tc=49.8 min CN=65 Runoff=20.29 cfs 3.472 af

Subcatchment C: SUBWAT C Runoff Area=23.300 ac 0.00% Impervious Runoff Depth=0.57"
Flow Length=500' Tc=18.0 min CN=61 Runoff=11.63 cfs 1.112 af

Subcatchment D: SUBWAT D Runoff Area=35.950 ac 16.27% Impervious Runoff Depth=1.12"
Flow Length=1,300' Tc=50.5 min CN=72 Runoff=22.29 cfs 3.358 af

Pond 5P: UT2 Pond Peak Elev=498.05' Storage=8.756 af Inflow=52.75 cfs 9.414 af
Primary=0.63 cfs 2.416 af Secondary=0.00 cfs 0.000 af Outflow=0.63 cfs 2.416 af

Total Runoff Area = 153.650 ac Runoff Volume = 9.414 af Average Runoff Depth = 0.74"
96.19% Pervious = 147.800 ac 3.81% Impervious = 5.850 ac

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Summary for Subcatchment A: SUBWAT A

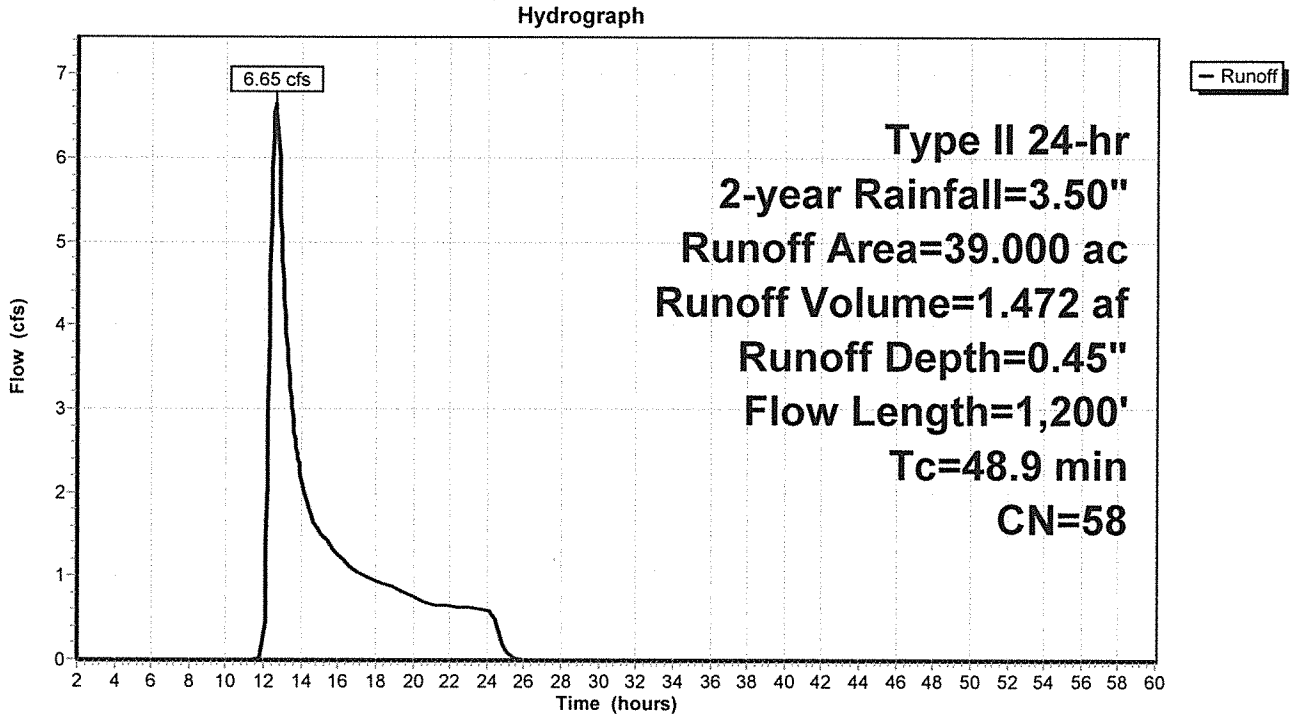
Runoff = 6.65 cfs @ 12.63 hrs, Volume= 1.472 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.50"

	Area (ac)	CN	Description
*	39.000	58	FOREST WITH SOME ROW CROP AG
	39.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	200	0.0500	0.13		**Sheet Flow, sheet flow** Woods: Light underbrush n= 0.400 P2= 3.50"
21.1	1,000	0.0250	0.79		**Shallow Concentrated Flow, shallow conc** Woodland Kv= 5.0 fps
3.0					**Direct Entry, channel**
48.9	1,200	Total			

Subcatchment A: SUBWAT A



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Summary for Subcatchment B: SUBWAT B

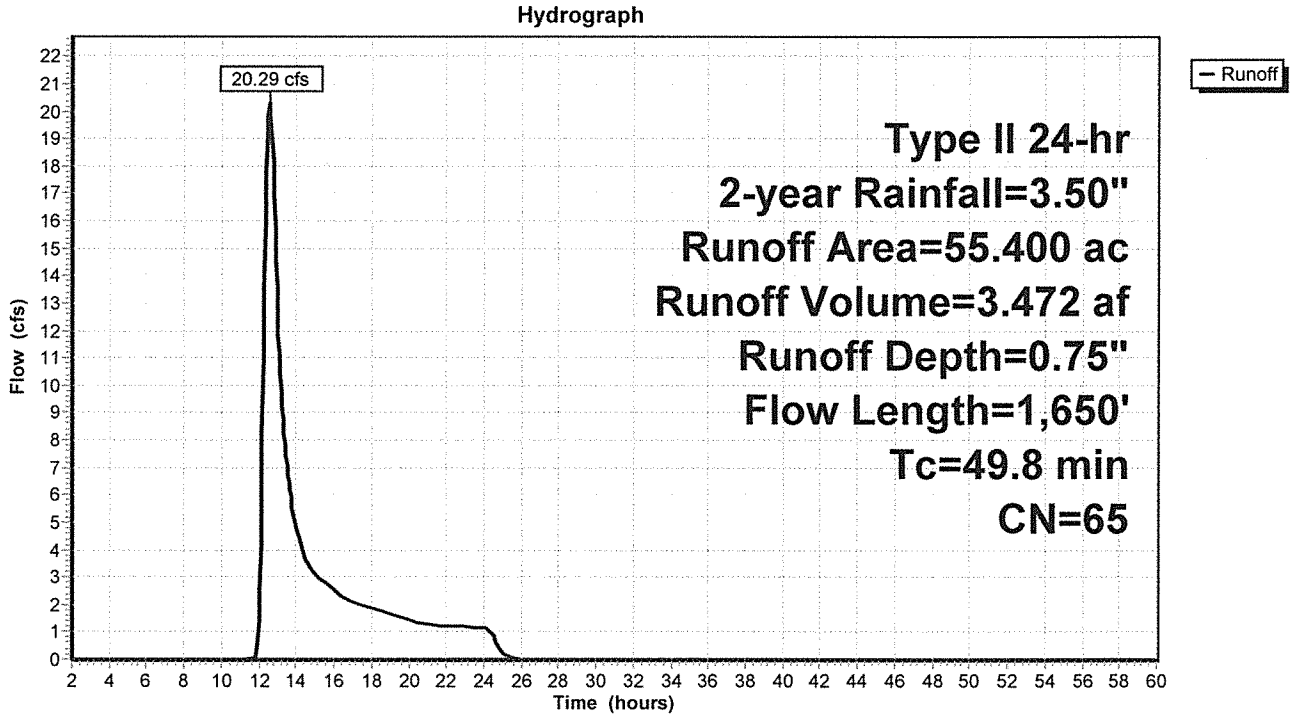
Runoff = 20.29 cfs @ 12.57 hrs, Volume= 3.472 af, Depth= 0.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.50"

	Area (ac)	CN	Description
*	55.400	65	FORESTED, ROW CROP AG, LOW DENSITY RES
	55.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	200	0.0300	0.50		**Sheet Flow, SHEET FLOW** Cultivated: Residue<=20% n= 0.060 P2= 3.50"
37.1	1,450	0.0170	0.65		**Shallow Concentrated Flow, SHALLOW CONC** Woodland Kv= 5.0 fps
6.0					**Direct Entry, CHANNEL FLOW**
49.8	1,650	Total			

Subcatchment B: SUBWAT B



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Summary for Subcatchment C: SUBWAT C

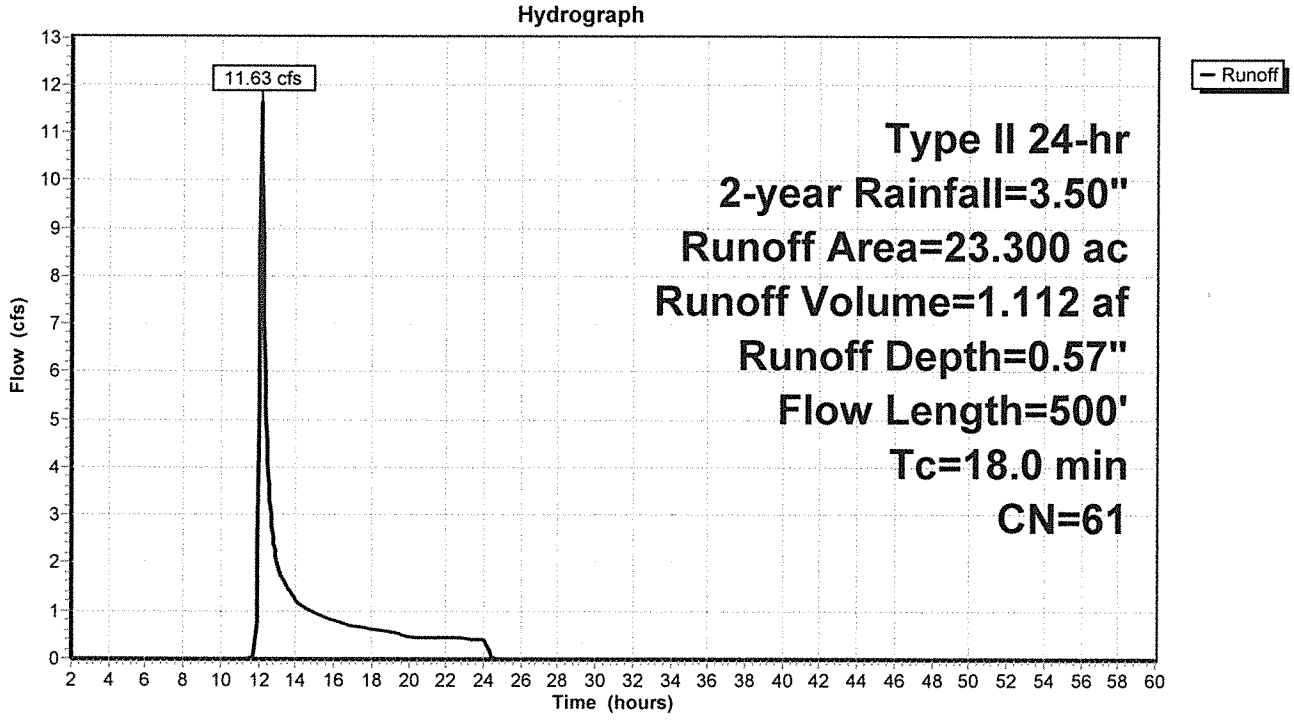
Runoff = 11.63 cfs @ 12.15 hrs, Volume= 1.112 af, Depth= 0.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.50"

	Area (ac)	CN	Description
*	23.300	61	PASTURE, FORESTED, FARMSTEAD
	23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	200	0.0400	0.56		**Sheet Flow, SHEET FLOW** Cultivated: Residue<=20% n= 0.060 P2= 3.50"
4.1	300	0.0300	1.21		**Shallow Concentrated Flow, SHALLOW CONC** Short Grass Pasture Kv= 7.0 fps
8.0					**Direct Entry, CHANNEL FLOW**
18.0	500	Total			

Subcatchment C: SUBWAT C



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Summary for Subcatchment D: SUBWAT D

Runoff = 22.29 cfs @ 12.54 hrs, Volume= 3.358 af, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=3.50"

	Area (ac)	CN	Description
*	30.100	66	FORESTED AND ROW CROP AG
*	5.850	100	POND WS
	35.950	72	Weighted Average
	30.100		83.73% Pervious Area
	5.850		16.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	200	0.0450	0.13		**Sheet Flow, SHEET FLOW** Woods: Light underbrush n= 0.400 P2= 3.50"
24.7	1,100	0.0220	0.74		**Shallow Concentrated Flow, SHALLOW CONC** Woodland Kv= 5.0 fps
50.5	1,300	Total			

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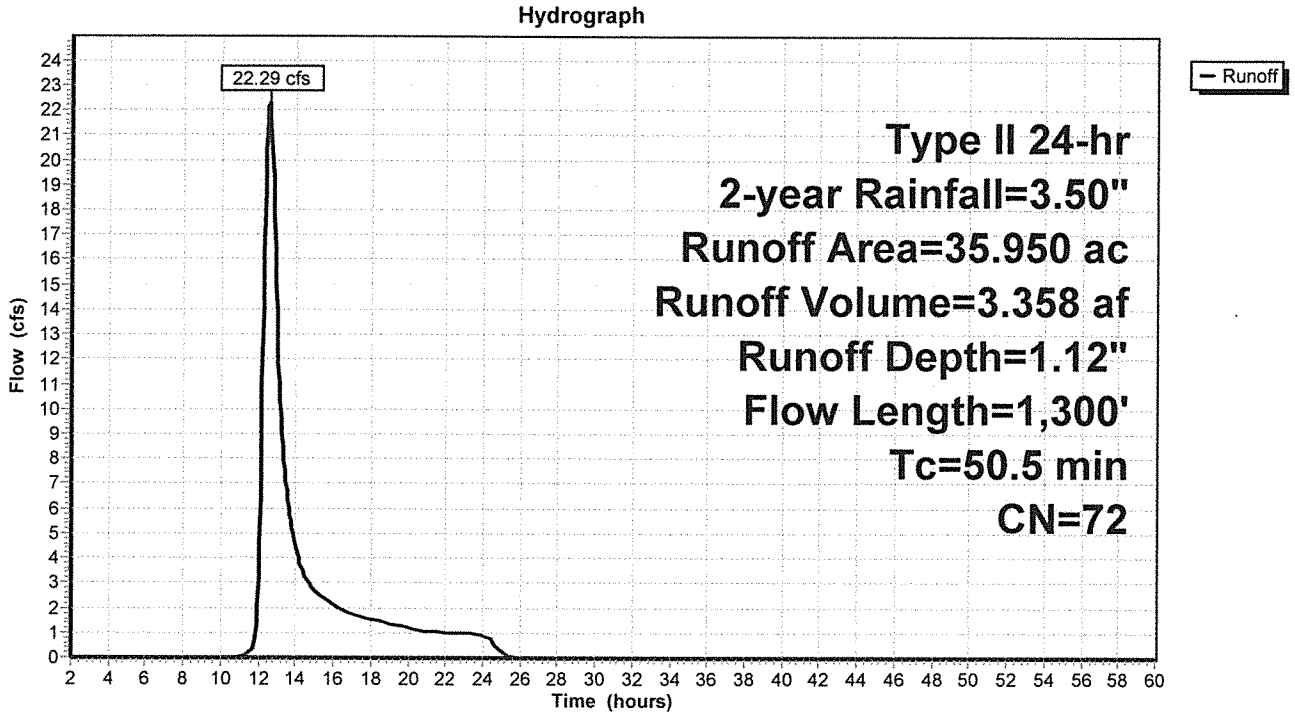
Subcatchment D: SUBWAT D



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Summary for Pond 5P: UT2 Pond

Inflow Area = 153.650 ac, 3.81% Impervious, Inflow Depth = 0.74" for 2-year event
Inflow = 52.75 cfs @ 12.55 hrs, Volume= 9.414 af
Outflow = 0.63 cfs @ 24.96 hrs, Volume= 2.416 af, Atten= 99%, Lag= 745.1 min
Primary = 0.63 cfs @ 24.96 hrs, Volume= 2.416 af
Secondary = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 498.05' @ 24.96 hrs Surf.Area= 8.053 ac Storage= 8.756 af

Plug-Flow detention time= 1,419.3 min calculated for 2.416 af (26% of inflow)
Center-of-Mass det. time= 1,243.5 min (2,163.6 - 920.1)

Volume	Invert	Avail.Storage	Storage Description
#1	496.70'	17.100 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
496.70	0.000	0.000	0.000
496.80	5.850	0.293	0.293
497.00	5.850	1.170	1.462
498.50	9.000	11.137	12.600
499.00	9.000	4.500	17.100

Device	Routing	Invert	Outlet Devices
#1	Primary	496.00'	**6.0" Round Culvert** L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 496.00' / 495.00' S= 0.0200 '/' Cc= 0.900 n= 0.025, Flow Area= 0.20 sf
#2	Secondary	498.50'	**30.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.63 cfs @ 24.96 hrs HW=498.05' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.63 cfs @ 3.19 fps)

Secondary OutFlow Max=0.00 cfs @ 2.00 hrs HW=496.70' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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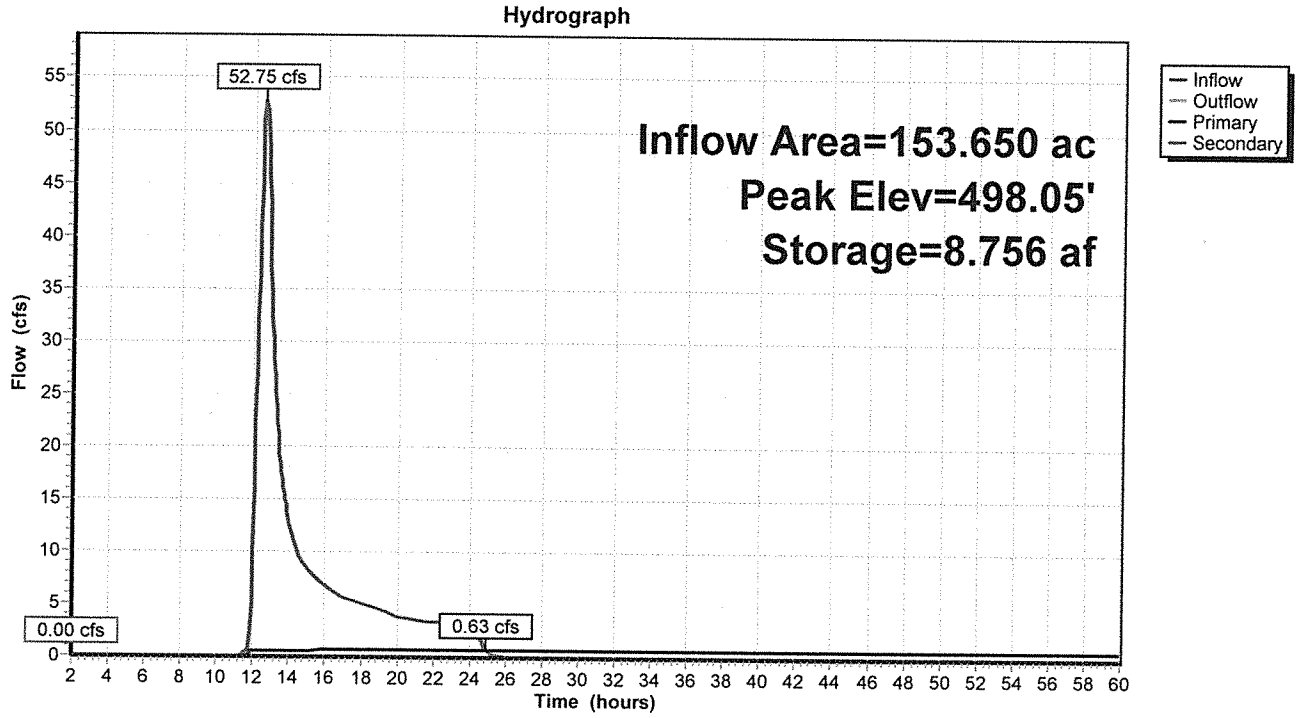
Pond 5P: UT2 Pond



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Summary for Pond 5P: UT2 Pond

Inflow Area = 153.650 ac, 3.81% Impervious, Inflow Depth = 0.74" for 2-year event
Inflow = 52.75 cfs @ 12.55 hrs, Volume= 9.414 af
Outflow = 0.63 cfs @ 24.96 hrs, Volume= 2.416 af, Atten= 99%, Lag= 745.1 min
Primary = 0.63 cfs @ 24.96 hrs, Volume= 2.416 af
Secondary = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 498.05' @ 24.96 hrs Surf.Area= 8.053 ac Storage= 8.756 af

Plug-Flow detention time= 1,419.3 min calculated for 2.416 af (26% of inflow)
Center-of-Mass det. time= 1,243.5 min (2,163.6 - 920.1)

Volume	Invert	Avail.Storage	Storage Description
#1	496.70'	17.100 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
496.70	0.000	0.000	0.000
496.80	5.850	0.293	0.293
497.00	5.850	1.170	1.462
498.50	9.000	11.137	12.600
499.00	9.000	4.500	17.100

Device	Routing	Invert	Outlet Devices
#1	Primary	496.00'	**6.0" Round Culvert** L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 496.00' / 495.00' S= 0.0200 '/' Cc= 0.900 n= 0.025, Flow Area= 0.20 sf
#2	Secondary	498.50'	**30.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.63 cfs @ 24.96 hrs HW=498.05' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.63 cfs @ 3.19 fps)

Secondary OutFlow Max=0.00 cfs @ 2.00 hrs HW=496.70' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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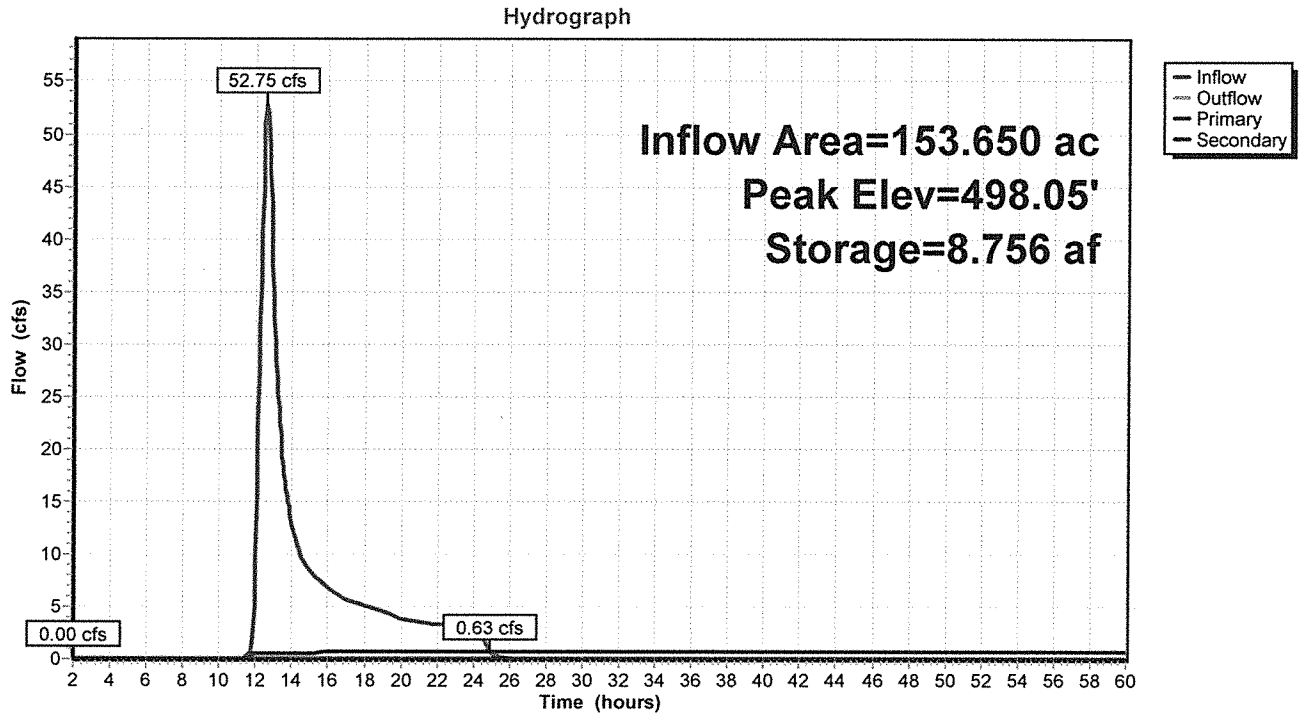
Pond 5P: UT2 Pond



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Summary for Pond 5P: UT2 Pond

Inflow Area = 153.650 ac, 3.81% Impervious, Inflow Depth = 1.30" for 5-year event
Inflow = 102.41 cfs @ 12.52 hrs, Volume= 16.631 af
Outflow = 5.02 cfs @ 22.82 hrs, Volume= 5.517 af, Atten= 95%, Lag= 618.4 min
Primary = 0.69 cfs @ 22.82 hrs, Volume= 2.699 af
Secondary = 4.33 cfs @ 22.82 hrs, Volume= 2.817 af

Routing by Stor-Ind method, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 498.63' @ 22.82 hrs Surf.Area= 9.000 ac Storage= 13.811 af

Plug-Flow detention time= 1,004.9 min calculated for 5.512 af (33% of inflow)
Center-of-Mass det. time= 849.6 min (1,750.4 - 900.8)

Volume	Invert	Avail.Storage	Storage Description
#1	496.70'	17.100 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
496.70	0.000	0.000	0.000
496.80	5.850	0.293	0.293
497.00	5.850	1.170	1.462
498.50	9.000	11.137	12.600
499.00	9.000	4.500	17.100

Device	Routing	Invert	Outlet Devices
#1	Primary	496.00'	**6.0" Round Culvert** L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 496.00' / 495.00' S= 0.0200 '/' Cc= 0.900 n= 0.025, Flow Area= 0.20 sf
#2	Secondary	498.50'	**30.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.69 cfs @ 22.82 hrs HW=498.63' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.69 cfs @ 3.54 fps)

Secondary OutFlow Max=4.32 cfs @ 22.82 hrs HW=498.63' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 4.32 cfs @ 1.07 fps)

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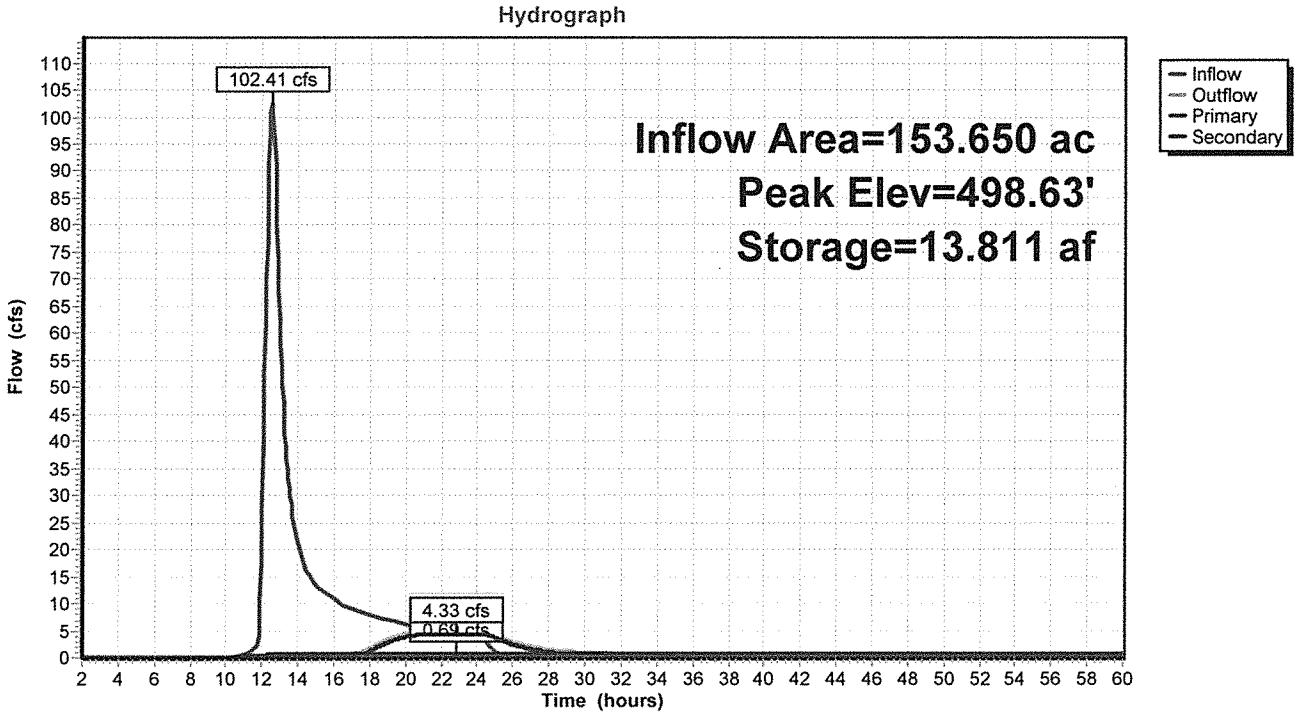
Pond 5P: UT2 Pond



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Summary for Pond 5P: UT2 Pond

Inflow Area = 153.650 ac, 3.81% Impervious, Inflow Depth = 1.75" for 10-year event
Inflow = 142.53 cfs @ 12.50 hrs, Volume= 22.360 af
Outflow = 12.17 cfs @ 16.52 hrs, Volume= 11.211 af, Atten= 91%, Lag= 241.2 min
Primary = 0.71 cfs @ 16.52 hrs, Volume= 2.747 af
Secondary = 11.47 cfs @ 16.52 hrs, Volume= 8.465 af

Routing by Stor-Ind method, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 498.76' @ 16.52 hrs Surf.Area= 9.000 ac Storage= 14.919 af

Plug-Flow detention time= 665.9 min calculated for 11.211 af (50% of inflow)
Center-of-Mass det. time= 527.2 min (1,418.8 - 891.6)

Volume	Invert	Avail.Storage	Storage Description
#1	496.70'	17.100 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
496.70	0.000	0.000	0.000
496.80	5.850	0.293	0.293
497.00	5.850	1.170	1.462
498.50	9.000	11.137	12.600
499.00	9.000	4.500	17.100

Device	Routing	Invert	Outlet Devices
#1	Primary	496.00'	**6.0" Round Culvert** L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 496.00' / 495.00' S= 0.0200 '/' Cc= 0.900 n= 0.025, Flow Area= 0.20 sf
#2	Secondary	498.50'	**30.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.71 cfs @ 16.52 hrs HW=498.76' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.71 cfs @ 3.61 fps)

Secondary OutFlow Max=11.46 cfs @ 16.52 hrs HW=498.76' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 11.46 cfs @ 1.48 fps)

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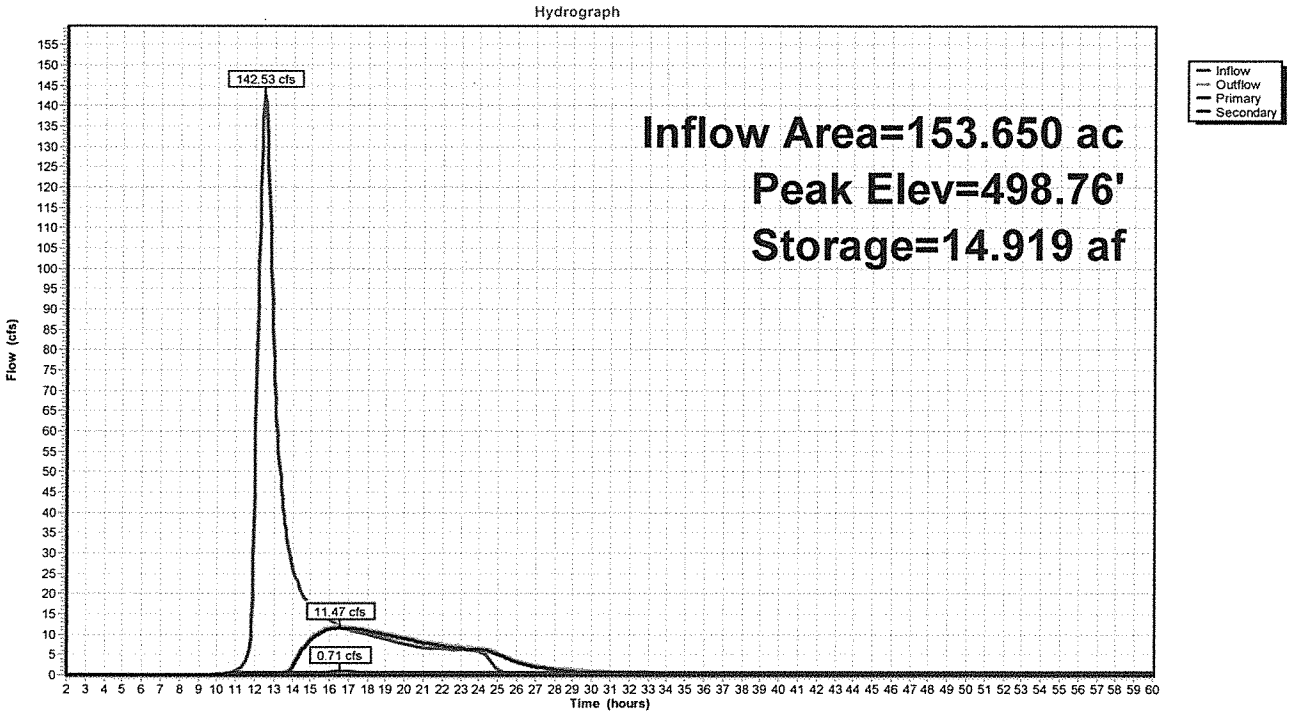
Pond 5P: UT2 Pond



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Summary for Pond 5P: UT2 Pond

Inflow Area = 153.650 ac, 3.81% Impervious, Inflow Depth = 2.30" for 25-year event
Inflow = 192.16 cfs @ 12.49 hrs, Volume= 29.426 af
Outflow = 28.11 cfs @ 14.34 hrs, Volume= 18.255 af, Atten= 85%, Lag= 110.8 min
Primary = 0.73 cfs @ 14.34 hrs, Volume= 2.788 af
Secondary = 27.38 cfs @ 14.34 hrs, Volume= 15.468 af

Routing by Stor-Ind method, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 498.96' @ 14.34 hrs Surf.Area= 9.000 ac Storage= 16.745 af

Plug-Flow detention time= 487.5 min calculated for 18.240 af (62% of inflow)
Center-of-Mass det. time= 367.1 min (1,250.5 - 883.4)

Volume	Invert	Avail.Storage	Storage Description
#1	496.70'	17.100 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
496.70	0.000	0.000	0.000
496.80	5.850	0.293	0.293
497.00	5.850	1.170	1.462
498.50	9.000	11.137	12.600
499.00	9.000	4.500	17.100

Device	Routing	Invert	Outlet Devices
#1	Primary	496.00'	**6.0" Round Culvert** L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 496.00' / 495.00' S= 0.0200 '/' Cc= 0.900 n= 0.025, Flow Area= 0.20 sf
#2	Secondary	498.50'	**30.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.73 cfs @ 14.34 hrs HW=498.96' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.73 cfs @ 3.72 fps)

Secondary OutFlow Max=27.37 cfs @ 14.34 hrs HW=498.96' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 27.37 cfs @ 1.98 fps)

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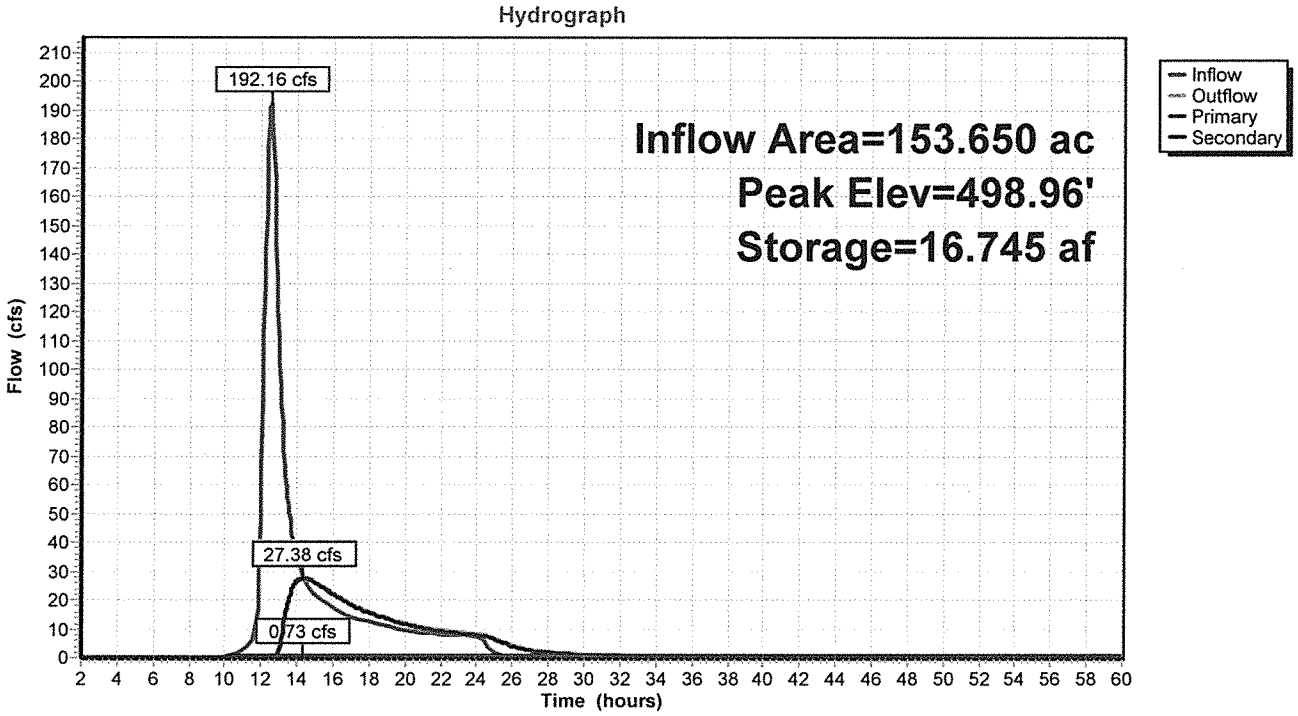
Pond 5P: UT2 Pond



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Summary for Pond 5P: UT2 Pond

[93] Warning: Storage range exceeded by 1.23'
[85] Warning: Oscillations may require Finer Routing>1 (severity=13)

Inflow Area = 153.650 ac, 3.81% Impervious, Inflow Depth = 3.04" for 50-year event
Inflow = 258.33 cfs @ 12.48 hrs, Volume= 38.871 af
Outflow = 246.70 cfs @ 12.95 hrs, Volume= 27.679 af, Atten= 4%, Lag= 28.3 min
Primary = 0.85 cfs @ 12.95 hrs, Volume= 2.829 af
Secondary = 245.85 cfs @ 12.95 hrs, Volume= 24.850 af

Routing by Stor-Ind method, Time Span= 2.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 500.23' @ 12.95 hrs Surf.Area= 9.000 ac Storage= 17.100 af

Plug-Flow detention time= 362.4 min calculated for 27.656 af (71% of inflow)
Center-of-Mass det. time= 258.8 min (1,134.1 - 875.3)

Volume	Invert	Avail.Storage	Storage Description
#1	496.70'	17.100 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
496.70	0.000	0.000	0.000
496.80	5.850	0.293	0.293
497.00	5.850	1.170	1.462
498.50	9.000	11.137	12.600
499.00	9.000	4.500	17.100

Device	Routing	Invert	Outlet Devices
#1	Primary	496.00'	**6.0" Round Culvert** L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 496.00' / 495.00' S= 0.0200 '/' Cc= 0.900 n= 0.025, Flow Area= 0.20 sf
#2	Secondary	498.50'	**30.0' long (Profile 1) Broad-Crested Rectangular Weir** Head (feet) 0.49 0.98 1.48 Coef. (English) 2.92 3.37 3.59

Primary OutFlow Max=0.85 cfs @ 12.95 hrs HW=500.23' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.85 cfs @ 4.35 fps)

Secondary OutFlow Max=245.45 cfs @ 12.95 hrs HW=500.23' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 245.45 cfs @ 4.72 fps)

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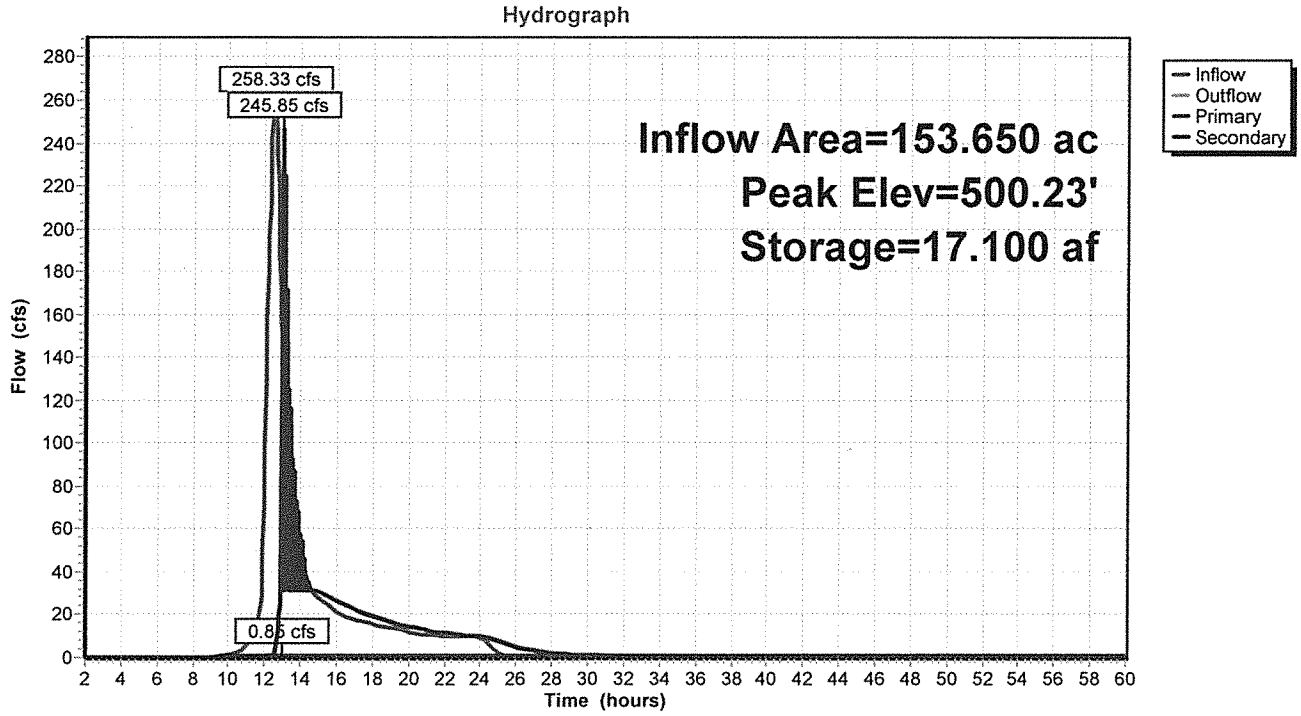
Pond 5P: UT2 Pond



WILDLANDS
ENGINEERING

Date: October 24, 2012

Project: Norkett Branch Mitigation Site- Yadkin 05, Union County, NC
005-02134

Subject: Dutchman's Creek Gage Analysis
USGS Gage 02123567
Montgomery County, North Carolina
Hydrologic Unit Code 03040104
Latitude 35°22'45", Longitude 80°01'49" NAD83
Drainage area 3.44 square miles

Attachments: USGS Gage Notes, Annual Peak Flow Records
PEAKFQ Flood Frequency Analysis Results of Gage Data
Wildlands Survey Data, collected 10-4-2012, with photos
HEC-RAS Model, Profile Plot with Surveyed Bankfull Elevations Noted

This packet summarizes Wildlands Engineering's gage survey and hydraulic modeling of the Dutchman's Creek gage. This gage was also surveyed and included as part of Piedmont regional curve with bankfull Q 85cfs.

Summary of Gage Data
The Dutchman's Creek gage site is located along River Road, approximately 5 miles north of NC-24/27 in Montgomery County, NC. The watershed size at the gage is 3.44 square miles. The gage collected data from 1982 through 2004 and contains 20 recorded observations. USGS gage notes, PEAKFQ flood frequency analysis and rating curve data are included as attachments with this memo.

Survey Notes
A field survey of the Dutchman's gage site was performed on October 4, 2012 by Nicole Macaluso and Ian Eckardt. Six (6) cross-sections were surveyed from upstream to downstream. Gage and staff plate were originally located on the upstream face of crossing between the two 72" CMP culverts, however, they were removed when the gage was discontinued in 2004. USGS gage notes were used to establish local datum. Reliable reference marks were located on upstream right culvert barrel (RM1) and downstream left culvert barrel (RM4).

Bankfull indicators were identified and surveyed at each cross-section as well as additional bankfull points between cross-sections to validate the model. Bankfull was coincident with top of bank at a clear break in slope between channel and floodplain features. Photos were taken at each cross-section and included as an attachment with this memo.

RAS Model Notes
A HEC-RAS model was developed from the survey data to estimate the effect of the culvert hydraulics on the stream and correlate bankfull indicators with recorded gage readings. Water surface elevations were surveyed at each cross-section as well as additional water surface elevations between cross-sections. These known water

surface elevations were used to calibrate the model and establish a base flow discharge. They were also used to calculate a water surface slope as the normal depth method boundary condition for the model.

Known bankfull indicators were used to determine a bankfull discharge by setting a range of bankfull values in 20 cfs intervals. These were later refined to 5 cfs intervals to establish a final bankfull discharge that most closely matched the observed bankfull stage. The surveyed bankfull stages are included as known water surface points for the BKF Q discharge. The bankfull discharge was best estimated between 180 and 220 cfs which corresponds to approximately a 1.2- year to 1.3-year recurrence interval from the PeakFQ gage analysis.

As a check, a gage reading of 4.7, surveyed at the cross-section just upstream of the original gage location, corresponds to a flow of 153 cfs using the USGS rating curve. Additionally, water surface elevations produced by the model at the upstream bridge face and cross-section upstream of the original gage location, 4.2 and 5.2, corresponded to flows of 122 and 188cfs from the USGS rating curve. These rating curve flows do not match the model's predicted bankfull discharge of 180 to 220 cfs, most likely due to hydraulics in the immediate vicinity of the culverts.

Based on the hydraulic modeling and gage rating curve data, we estimate that the bankfull discharge at the Dutchman's Creek gage is in the range of 180 to 220 cfs. This discharge is significantly more than the 85 cfs discharge used in the development of the Piedmont regional curve.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Description revised:
02-20-2002 E.S. Rudisill
02-05-2004 B.C. Steiner
01-20-2005 B.C. Steiner

DESCRIPTION OF GAGING STATION **02123567 DUTCHMANS CREEK NEAR UWHARRIE, N.C.**

LOCATION.--Lat 35° 22'45", Long 80° 01'49",NAD83, Montgomery County, Hydrologic Unit 03040103, near midstream at upstream side of two 6 ft corrugated metal pipe culverts at SR 1150, 1.0 mile upstream from mouth and 3.0 miles southwest of Uwharrie, N.C.

DRAINAGE AREA.--3.44 square miles.

ESTABLISHMENT AND HISTORY.--Established as a corrugated metal pipe stilling well and aluminum shelter on October 29, 1981 by USGS personnel. Discontinued October 13, 1983. Re-established October 1, 1985. A Fisher/Porter digital recorder (ADR) with paper punch tape was the recording instrument used until the original gage structure was destroyed by a traffic accident in March of 1998. A new gage was built at the original site, at the same datum, on April 14 and 15, 1998 to replace the destroyed structure. The new gage structure included a 24-inch CMP stilling well and a standard aluminum shelter, with a Sutron 8400 electronic data logger (EDL) installed as the recording instrument. On September 15, 1998, the Sutron 8400 EDL was removed and a Sutron 8200 data collection platform (DCP) with satellite telemetry was installed***. Station was discontinued September 30, 2004, and close-out levels were ru****n.*

RECORDS AVAILABLE.--Continuous stage and discharge records available from October 1981 to September 30 1983, and from October 1985 to present. Continuous water temperature and specific conductance (hourly) data were collected from 1981 to 1983. Periodic water-quality samples were also taken from 1981 to 1988.

GAGE.--Sutron 8200 DCP, (ID17800452) and Handar 436a shaft encoder with a 15-minute recording interval housed in a standard aluminum shelter mounted over a 24" CMP well. DCP is referenced to an electric tape gage in the well. Outside staff gage 0.0-10.1 ft is mounted on pressure treated lumber and attached to the right side of the CMP well. The well is about 13 ft in height and anchored in the channel between the upstream side of two 6' CMP culverts. The well has six 2" galvanized steel pipe couplings, 3 on each side, welded into the well wall that serve as intakes. The well also has a lower cleanout door. Access to the gage shelter is by a 12 ft wooden platform and walkway that is bolted to the CMP and extends from shoulder of road to shelter. Both CMP culvert pipes are set in natural ground and covered by road fill. Very large irregular blocks of concrete and rip-rap are at upstream and downstream side of culvert. These large demolition debris materials serve as erosion control along both sides of the culvert entrance and exit as well as in between pipes. The culvert structure does not have poured concrete wingwalls, headwalls, foundations, footings or webs. Both culvert pipes were constructed with reverse slope so that the upstream invert is lower than the downstream invert.

Elevation to gage datum of:

Bottom of well	0.52 ft	
Instrument shelf	ft	
Invert of culvert	0.51 ft	
Inspection door sill	ft	
ADAPS Very High Threshold		13.0 ft
ADAPS Very Low Threshold		0.40 ft

ELEVATION.--Datum of gage is 340 ft above sea level, NGVD 1929 from topographic map.

CHANNEL AND CONTROL.--The channel meanders above the station and approaches the gage slightly from the left. A small pool exists at the upstream side of the culvert where gage structure is anchored in the channel. After passing through the culvert, the stream empties into a fairly deep pool that extends to about 30 ft below the downstream side of the culvert. Below this pool, the channel makes a gentle bend to the left and resumes a meandering course. The streambed is very rocky both upstream and downstream from the gage. The channel bottom is composed entirely of rock outcrops, loose rock, and gravel with some sand present. The right bank is fairly steep and wooded upstream from the gage. The left bank is low and has a fairly wide floodplain upstream. Both banks are relatively low and wooded downstream from the gage. All flow is confined to the culvert pipes except

during extreme flooding when road overflow can occur. Based on a road profile survey from April 21, 1992, road overflow begins at a stage of 10.39 ft. The downstream inverts of the CMP culvert pipes are higher in elevation than the upstream inverts. As a result, the culvert exit forms the control at low stages. At low to medium stages, the culvert pipe entrance becomes the control. At high stages, the culvert opening and road embankment become the control. The culvert pipe control is stable but may be subject to periodic debris lodgement and some leakage.

DISCHARGE MEASUREMENTS.--Wading measurements are made at the most suitable section along the channel depending on conditions at the site. Historically, wading measurements have been made at various sections both up- and downstream from the gage. Measuring conditions during periods of low flow are poor. For the 2001 WY, high stage measurements were impossible due to the destructiom of the wooden platform and handrail at the downstream side of the culvert by loggers in October, 2000. The platform is scheduled to be rebuilt.

CABLEWAY.--None.

MAXIMUM DISCHARGE.--1,560 cfs, April 22, 1992; gage height 11.96 ft (from floodmark).

MINIMUM DISCHARGE.—No flow June 19, 23-25, July 8, 9, 19, August 9-15, 2002.

POINT OF ZERO FLOW.--0.80 ft (1992). 0.80 ft(08-13-1999).

REGULATION AND DIVERSION.--None.

COOPERATION.--Station operated in cooperation with NCDEHNR.

CLASSIFICATION.--Continuous long-term streamflow.

WINTER FLOW.--Ice effect is possible during extreme cold weather.

REFERENCE MARKS.--**RP1:** Three hacksaw cuts in top upstream end of left culvert barrel. *Used as origin at elevation of 6.978 ft since 1987.

Elevation: 7.000 ft (10-29-1981)
6.990 ft (01-07-1983)
6.978 ft (09-03-1987)*

RM 1: 80d spike driven horizontally on streamward side of 15- inch sweetgum tree, on right bank, 65 ft upstream from centerline of road and 19 ft from centerline of stream. Spike is 2 ft above ground surface.

Elevation: 7.954 ft (10-29-1981)
7.961 ft (01-07-1983)
7.962 ft (09-03-1987)
7.980 ft (04-08-1992)

RM 2: Chiseled circle in top of rock 33 ft upstream from gage in middle of stream channel. Used as origin prior to 1987.

Elevation: 2.736 ft (10-29-1981)
2.734 ft (09-03-1987)
2.749 ft (04-08-1992)
2.774 ft (04-15-1998)
2.774 ft (05-11-1999)
Could not locate 11-03-2004

RM 3: 80d spike driven horizontally in base of 12-inch gum tree. Spike is on downstream side of tree, 1 foot above natural ground. Tree is 51.5 ft upstream from centerline of road on left bank, and 16 ft from centerline of stream.

Elevation:	5.636 ft (10-29-1981)
	5.642 ft (01-07-1983)
	5.652 ft (09-03-1987)
	5.666 ft (04-08-1992)

RM 4: Two hacksaw cuts in top of downstream end of left culvert barrel.

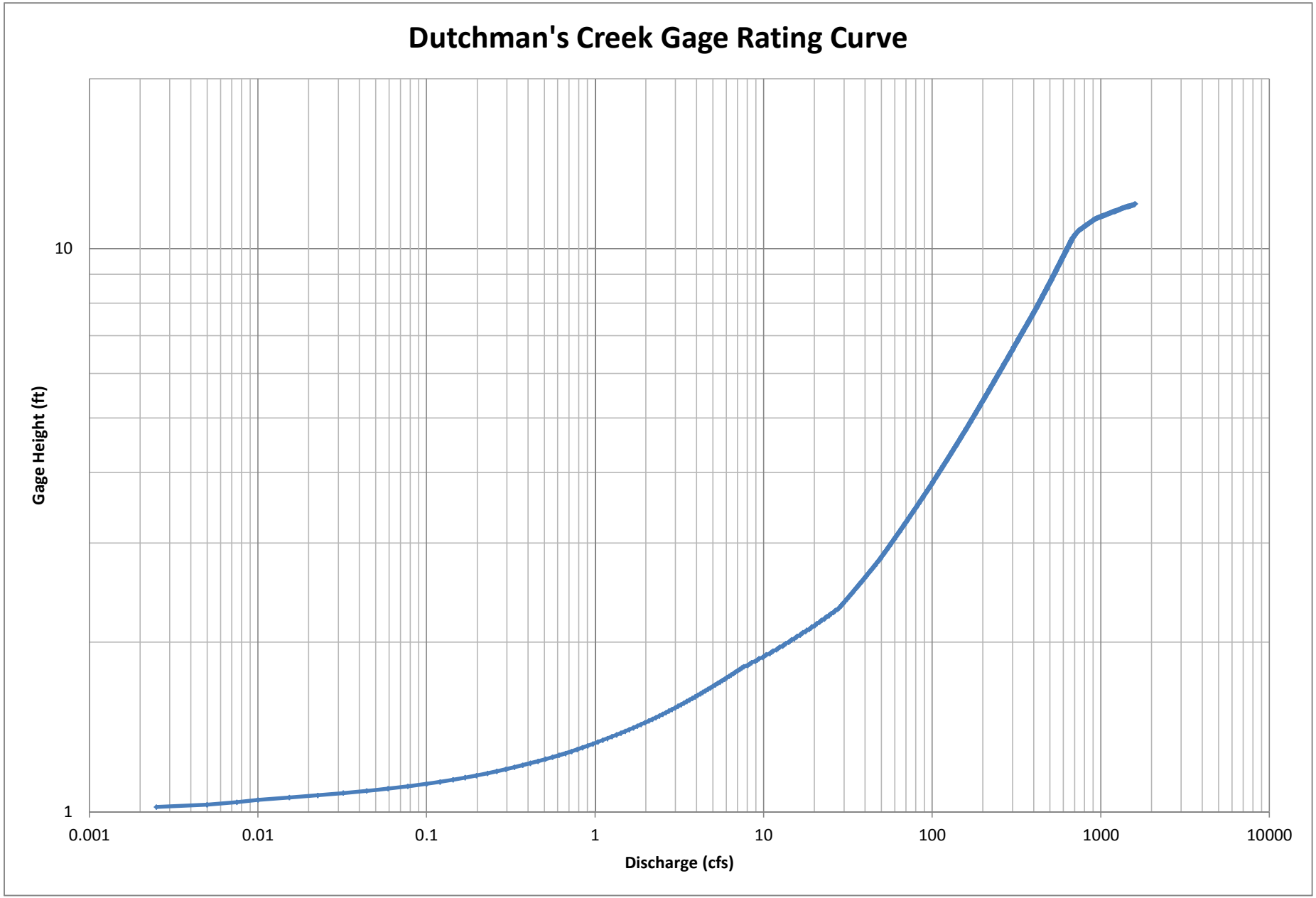
Elevation:	6.404 ft (10-29-1981)
	6.396 ft (01-07-1983)
	6.377 ft (09-03-1987)
	6.373 ft (04-08-1992)
	6.388 ft (04-15-1998)
	6.398 ft (05-11-1999)
	6.395 ft (11-03-2004)

RM 5: Chiseled square at high point of rock boulder or outcrop 38 ft upstream from gage. Rock is in channel and RM is in top center of rock. (Est. 04-15-1998)

Elevation:	3.431 ft (04-15-1998)
	3.439 ft (05-11-1999)
	3.444 ft (06-24-2002)
	3.438 ft (11-03-2004)

ET Index: (Est. 04-08-1992)

Elevation:	13.628 ft (04-08-1992)
New rebuilt gage	13.082 ft (04-15-1998)
	13.088 ft (05-11-1999)
	13.096 ft (06-24-2002)
	13.092 ft (11-03-2004)


Dutchman's Creek Gage Rating Curve
Gage Height (ft)
10
1
0.001
0.01
0.1
1
10
100
1000
10000
Discharge (cfs)

APPENDIX 7. Floodplain Check List

EEP Floodplain Requirements Checklist

This form was developed by the National Flood Insurance program, NC Floodplain Mapping program and Ecosystem Enhancement Program to be filled for all EEP projects. The form is intended to summarize the floodplain requirements during the design phase of the projects. The form should be submitted to the Local Floodplain Administrator with three copies submitted to NFIP (attn. Edward Curtis), NC Floodplain Mapping Unit (attn. John Gerber) and NC Ecosystem Enhancement Program.

Project Location

Name of project:	Norkett Branch Stream Mitigation Site
Name of stream or feature:	Norkett Branch (FEMA mapped)
County:	Union
Name of river basin:	Yadkin
Is project urban or rural?	Rural
Name of Jurisdictional municipality/county:	Union County
DFIRM panel number for entire site:	Community: Union County (Unincorporated) Community No. 370234 FIRM Panel: 5480 Map Number: 3710548000J Effective Date: October 16, 2008
Consultant name:	Wildlands Engineering, Inc. Emily Reinicker, PE, CFM
Phone number:	704-332-7754
Address:	1430 S. Mint Street, Suite 104 Charlotte, NC 28203

Design Information

Provide a general description of project (one paragraph). Include project limits on a reference orthophotograph at a scale of 1" = 500'.
Wildlands Engineering, Inc. (Wildlands) is completing a full-delivery project for the North Carolina Ecosystem Enhancement Program (EEP) to restore and enhance a total of 7,661 existing linear feet (LF) of perennial stream in Union County, NC. The streams proposed for restoration and enhancement include Norkett Branch, a first order stream, two unnamed first order tributaries to Norkett Branch (UT1 and UT2), and two intermittent tributaries to Norkett Branch (UT2A and UT3). A storm water BMP is proposed to treat water quality on the non-jurisdictional headwaters of UT3 and an adjacent ephemeral drainage feature. The project is being completed to provide stream mitigation units (SMUs) in the Yadkin River Basin. Buffer restoration will also take place but is not intended for mitigation credit at this time.

Please see attached Annotated FIRM Map and Topographic Work Map.

Summarize stream reaches or wetland areas according to their restoration priority.
The construction on Norkett Branch will be comprised of Rosgen Priority 1 restoration of dimension, pattern, and profile. A stable cross-section will be designed to flood onto the surrounding topography at flows greater than the 1.5-year bankfull event. A meandering pattern will be restored, and the channel profile elevation will be raised approximately 6" to 12" to connect the channel to the surrounding floodplain topography. Low profile in-stream habitat structures comprised of logs and rocks will be used to help stabilize the channel. Native vegetation will be planted within the conservation easement boudary to establish a riparian buffer. The unnamed tributaries (UTs) to Norkett Branch will also be restored to meandering channels or enhanced in place by laying bak banks, adding in-stream habitat structures, and planting riparian buffers. No wetland work for mitigation credit is proposed.

Reach	**Length**	**Priority**
SFHA mapped channel		
Norkett Branch	**3,726 LF**	**Priority 1 Restoration**
non-SFHA mapped channels		
UT1	1,198 LF	Priority 1 Restoration
UT2 – Reach 1	1,020 LF	Priority 1 Restoration
UT2 – Reach 2	1,405 LF	Priority 2 Restoration
UT2 – Reach 3A	1,038 LF	Priority 3 Restoration
UT2 – Reach 3B	661 LF	Priority 4 Restoration
UT2A	1,296 LF	Enhancement II
UT3	163 LF	Enhancement II

Floodplain Information

Is project located in a Special Flood Hazard Area (SFHA)?

YES- Norkett Branch is located in SFHA. The Unnamed tributaries (UTs) do not have associated SFHA.

If project is located in a SFHA, check how it was determined:

- ☐ Redelineation
- ☐ Detailed Study
- ☐ Limited Detail Study
- ☐ Approximate Study
- ☐ Don't know

List flood zone designation:

Check if applies:

- ☑ AE Zone
  - ☐ Floodway
  - ☐ Non-Encroachment
- ☐ A Zone
  - ☐ Local Setbacks Required
  - ☐ No Local Setbacks Required

If local setbacks are required, list how many feet: n/a

Does proposed channel boundary encroach outside floodway/non-encroachment/setbacks?

- ☑ Yes
- ☐ No

Land Acquisition (Check)

- ☐ State owned (fee simple)
- ☐ Conservation easment (Design Bid Build)
- ☐ Conservation Easement (Full Delivery Project)

Note: if the project property is state-owned, then all requirements should be addressed to the Department of Administration, State Construction Office (attn: Herbert Neily, (919) 807-4101)
Is community/county participating in the NFIP program? ☒ Yes ☐ No
Name of Local Floodplain Administrator: Mr. Lee Jenson, Landuse Administrator, Union County Planning Director – Mr. Richard Black, Planning Director, Union County Phone Number: 704 283-3565

Floodplain Requirements

This section to be filled by designer/applicant following verification with the LFPA

☐ No Action

☐ No Rise

☐ Letter of Map Revision
☒ Conditional Letter of Map Revision

☐ Other Requirements

List other requirements:

Comments:

Name: Emily G. Reinicker, PE, CFM Signature: [signature]

Title: Senior Water Resources Engineer Date: 3/12/2013

APPENDIX 8. Site Protection Instruments

STATE OF NORTH CAROLINA

CONSERVATION EASEMENT PROVIDED PURSUANT TO FULL DELIVERY MITIGATION CONTRACT

_____ COUNTY

SPO File Number

Prepared by: Office of the Attorney General
Property Control Section
Return to: NC Department of Administration
State Property Office
1321 Mail Service Center
Raleigh, NC 27699-1321

THIS CONSERVATION EASEMENT DEED, made this _____day of _____, 20__, by _____*Landowner name goes here*_____, ("**Grantor**"), whose mailing address is _____*Landowner address goes here*_____, to the State of North Carolina, ("**Grantee**"), whose mailing address is State of North Carolina, Department of Administration, State Property Office, 1321 Mail Service Center, Raleigh, NC 27699-1321. The designations of Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine, or neuter as required by context.

WITNESSETH:

WHEREAS, pursuant to the provisions of N.C. Gen. Stat. § 143-214.8 et seq., the State of North Carolina has established the Ecosystem Enhancement Program (formerly known as the Wetlands Restoration Program) within the Department of Environment and Natural Resources for the purposes of acquiring, maintaining, restoring, enhancing, creating and preserving wetland and riparian resources that contribute to the protection and improvement of water quality, flood prevention, fisheries, aquatic habitat, wildlife habitat, and recreational opportunities; and

WHEREAS, this Conservation Easement from Grantor to Grantee has been negotiated, arranged and provided for as a condition of a full delivery contract between *(insert name and address of full delivery contract provider)* and the North Carolina Department of Environment and Natural Resources, to provide stream, wetland and/or buffer mitigation pursuant to the North Carolina Department of Environment and Natural Resources Purchase and Services Contract Number _____.

WHEREAS, The State of North Carolina is qualified to be the Grantee of a Conservation Easement pursuant to N.C. Gen. Stat. § 121-35; and

WHEREAS, the Department of Environment and Natural Resources, the North Carolina Department of Transportation and the United States Army Corps of Engineers, Wilmington District entered into a Memorandum of Agreement, (MOA) duly executed by all parties in Greensboro, NC on July 22, 2003, which recognizes that the Ecosystem Enhancement Program is to provide for compensatory mitigation by effective protection of the land, water and natural resources of the State by restoring, enhancing and preserving ecosystem functions; and

WHEREAS, the acceptance of this instrument for and on behalf of the State of North Carolina was granted to the Department of Administration by resolution as approved by the Governor and Council of State adopted at a meeting held in the City of Raleigh, North Carolina, on the 8th day of February 2000; and

WHEREAS, the Ecosystem Enhancement Program in the Department of Environment and Natural Resources, which has been delegated the authority authorized by the Governor and Council of State to the Department of Administration, has approved acceptance of this instrument; and

WHEREAS, Grantor owns in fee simple certain real property situated, lying, and being in _____ Township, _____ County, North Carolina (the "**Property**"), and being more particularly described as that certain parcel of land containing approximately _____ acres and being conveyed to the Grantor by deed as recorded in **Deed Book _____ at Page ____** of the _____ County Registry, North Carolina; and

WHEREAS, Grantor is willing to grant a Conservation Easement over the herein described areas of the Property, thereby restricting and limiting the use of the included areas of the Property to the terms and conditions and purposes hereinafter set forth, and Grantee is willing to accept such Conservation Easement. This Conservation Easement shall be for the protection and benefit of *(if known, insert name of stream, branch, river or waterway here)*.

NOW, THEREFORE, in consideration of the mutual covenants, terms, conditions, and restrictions hereinafter set forth, Grantor unconditionally and irrevocably hereby grants and conveys unto Grantee, its successors and assigns, forever and in perpetuity, a Conservation Easement along with a general Right of Access.

The Easement Area consists of the following:

Tracts Number _____ containing a total of _____ **acres** as shown on the plats of survey entitled "Final Plat, Conservation Easement for North Carolina Ecosystem Enhancement Program, Project Name: _____ Creek, SPO File No._____, EEP Site No. _____, Property of _____," dated _____, 2011 by *name of surveyor,* PLS Number _____ and recorded in the _____ County, North Carolina Register of Deeds at **Plat Book _____ Pages _____.**

See attached "**Exhibit A**", Legal Description of area of the Property hereinafter referred to as the "Easement Area"

The purposes of this Conservation Easement are to maintain, restore, enhance, construct, create and preserve wetland and/or riparian resources in the Easement Area that contribute to the protection and improvement of water quality, flood prevention, fisheries, aquatic habitat, wildlife habitat, and recreational opportunities; to maintain permanently the Easement Area in its natural condition, consistent with these purposes; and to prevent any use of the Easement Area that will significantly impair or interfere with these purposes. To achieve these purposes, the following conditions and restrictions are set forth:

I. DURATION OF EASEMENT

Pursuant to law, including the above referenced statutes, this Conservation Easement and Right of Access shall be perpetual and it shall run with, and be a continuing restriction upon the use of, the Property, and it shall be enforceable by the Grantee against the Grantor and against Grantor's heirs, successors and assigns, personal representatives, agents, lessees, and licensees.

II. GRANTOR RESERVED USES AND RESTRICTED ACTIVITES

The Easement Area shall be restricted from any development or usage that would impair or interfere with the purposes of this Conservation Easement. Unless expressly reserved as a compatible use herein, any activity in, or use of, the Easement Area by the Grantor is prohibited as inconsistent with the purposes of this Conservation Easement. Any rights not expressly reserved hereunder by the Grantor have been acquired by the Grantee. Any rights not expressly reserved hereunder by the Grantor, including the rights to all mitigation credits, including, but not limited to, stream, wetland, and riparian buffer mitigation units, derived from each site within the area of the Conservation Easement, are conveyed to and belong to the Grantee. Without limiting the generality of the foregoing, the following specific uses are prohibited, restricted, or reserved as indicated:

A. Recreational Uses. Grantor expressly reserves the right to undeveloped recreational uses, including hiking, bird watching, hunting and fishing, and access to the Easement Area for the purposes thereof.

B. Motorized Vehicle Use. Motorized vehicle use in the Easement Area is prohibited.

C. Educational Uses. The Grantor reserves the right to engage in and permit others to engage in educational uses in the Easement Area not inconsistent with this Conservation Easement, and the right of access to the Easement Area for such purposes including organized educational activities such as site visits and observations. Educational uses of the property shall not alter vegetation, hydrology or topography of the site.

D. Vegetative Cutting. Except as related to the removal of non-native plants, diseased or damaged trees, or vegetation that destabilizes or renders unsafe the Easement Area to persons or natural habitat, all cutting, removal, mowing, harming, or destruction of any trees and vegetation in the Easement Area is prohibited.

E. Industrial, Residential and Commercial Uses. All industrial, residential and commercial uses are prohibited in the Easement Area.

F. Agricultural Use. All agricultural uses are prohibited within the Easement Area including any use for cropland, waste lagoons, or pastureland.

G. New Construction. There shall be no building, facility, mobile home, antenna, utility pole, tower, or other structure constructed or placed in the Easement Area.

H. Roads and Trails. There shall be no construction of roads, trails, walkways, or paving in the Easement Area.

I. Signs. No signs shall be permitted in the Easement Area except interpretive signs describing restoration activities and the conservation values of the Easement Area, signs identifying the owner of the Property and the holder of the Conservation Easement, signs giving directions, or signs prescribing rules and regulations for the use of the Easement Area may be allowed.

J. Dumping or Storing. Dumping or storage of soil, trash, ashes, garbage, waste, abandoned vehicles, appliances, machinery, or any other material in the Easement Area is prohibited.

K. Grading, Mineral Use, Excavation, Dredging. There shall be no grading, filling, excavation, dredging, mining, drilling; removal of topsoil, sand, gravel, rock, peat, minerals, or other materials.

L. Water Quality and Drainage Patterns. There shall be no diking, draining, dredging, channeling, filling, leveling, pumping, impounding or diverting, causing, allowing or permitting the diversion of surface or underground water in the Easement Area. No altering or tampering with water control structures or devices, or disruption or alteration of the restored, enhanced, or created drainage patterns is allowed. All removal of wetlands, polluting or discharging into waters, springs, seeps, or wetlands, or use of pesticide or biocides in the Easement Area is prohibited. In the event of an emergency interruption or shortage of all other water sources, water from within the Easement Area may temporarily be used for good cause shown as needed for the survival of livestock and agricultural production on the Property.

M. Subdivision and Conveyance. Grantor voluntarily agrees that no subdivision, partitioning, or dividing of the underlying Property owned by the Grantor in fee simple ("fee") that is subject to this Easement is allowed. Unless agreed to by the Grantee in writing, any future conveyance of the underlying fee and the rights conveyed herein shall be as a single block of property. Any future transfer of the fee simple shall be subject to this Conservation Easement. Any transfer of the fee is subject to the Grantee's right of unlimited and repeated ingress and egress over and across the Property to the Easement Area for the purposes set forth herein.

N. Development Rights. All development rights are permanently removed from the Easement Area and are non-transferrable.

O. Disturbance of Natural Features. Any change, disturbance, alteration or impairment of the natural features of the Easement Area or any intentional introduction of non-native plants, trees and/or animal species by Grantor is prohibited.

The Grantor may request permission to vary from the above restrictions for good cause shown, provided that any such request is not inconsistent with the purposes of this Conservation Easement, and the Grantor obtains advance written approval from the N.C. Ecosystem Enhancement Program, whose mailing address is 1652 Mail Services Center, Raleigh, NC 27699-1652.

III. GRANTEE RESERVED USES

A. Right of Access, Construction, and Inspection. The Grantee, its employees and agents, successors and assigns, receive a perpetual Right of Access to the Easement Area over the Property at reasonable times to undertake any activities to restore, construct, manage, maintain, enhance, and monitor the stream, wetland and any other riparian resources in the Easement Area, in accordance with restoration activities or a long-term management plan. Unless otherwise specifically set forth in this Conservation Easement, the rights granted herein do not include or establish for the public any access rights.

B. Restoration Activities. These activities include planting of trees, shrubs and herbaceous vegetation, installation of monitoring wells, utilization of heavy equipment to grade, fill, and prepare the soil, modification of the hydrology of the site, and installation of natural and manmade materials as needed to direct in-stream, above ground, and subterraneous water flow.

C. Signs. The Grantee, its employees and agents, successors or assigns, shall be permitted to place signs and witness posts on the Property to include any or all of the following: describe the project, prohibited activities within the Conservation Easement, or identify the project boundaries and the holder of the Conservation Easement.

IV. ENFORCEMENT AND REMEDIES

A. Enforcement. To accomplish the purposes of this Conservation Easement, Grantee is allowed to prevent any activity within the Easement Area that is inconsistent with the purposes of this Easement and to require the restoration of such areas or features in the Easement Area that may have been damaged by such unauthorized activity or use. Upon any breach of the terms of this Conservation Easement by Grantor, the Grantee shall, except as provided below, notify the Grantor in writing of such breach and the Grantor shall have ninety (90) days after receipt of such notice to correct the damage caused by such breach. If the breach and damage remains uncured after ninety (90) days, the Grantee may enforce this Conservation Easement by bringing appropriate legal proceedings including an action to recover damages, as well as injunctive and other relief. The Grantee shall also have the power and authority, consistent with its statutory authority: (a) to prevent any impairment of the Easement Area by acts which may be unlawful or in violation of this Conservation Easement; (b) to otherwise preserve or protect its interest in the Property; or (c) to seek damages from any appropriate person or entity. Notwithstanding the foregoing, the Grantee reserves the immediate right, without notice, to obtain a temporary restraining order, injunctive or other appropriate relief, if the breach is or would irreversibly or

otherwise materially impair the benefits to be derived from this Conservation Easement, and the Grantor and Grantee acknowledge that the damage would be irreparable and remedies at law inadequate. The rights and remedies of the Grantee provided hereunder shall be in addition to, and not in lieu of, all other rights and remedies available to Grantee in connection with this Conservation Easement.

B. Inspection. The Grantee, its employees and agents, successors and assigns, have the right, with reasonable notice, to enter the Easement Area over the Property at reasonable times for the purpose of inspection to determine whether the Grantor is complying with the terms, conditions and restrictions of this Conservation Easement.

C. Acts Beyond Grantor's Control. Nothing contained in this Conservation Easement shall be construed to entitle Grantee to bring any action against Grantor for any injury or change in the Easement Area caused by third parties, resulting from causes beyond the Grantor's control, including, without limitation, fire, flood, storm, and earth movement, or from any prudent action taken in good faith by the Grantor under emergency conditions to prevent, abate, or mitigate significant injury to life~~,~~ or damage to the Property resulting from such causes.

D. Costs of Enforcement. Beyond regular and typical monitoring expenses, any costs incurred by Grantee in enforcing the terms of this Conservation Easement against Grantor, including, without limitation, any costs of restoration necessitated by Grantor's acts or omissions in violation of the terms of this Conservation Easement, shall be borne by Grantor.

E. No Waiver. Enforcement of this Easement shall be at the discretion of the Grantee and any forbearance, delay or omission by Grantee to exercise its rights hereunder in the event of any breach of any term set forth herein shall not be construed to be a waiver by Grantee.

V. MISCELLANEOUS

A. This instrument sets forth the entire agreement of the parties with respect to the Conservation Easement and supersedes all prior discussions, negotiations, understandings or agreements relating to the Conservation Easement. If any provision is found to be invalid, the remainder of the provisions of the Conservation Easement, and the application of such provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

B. Grantor is responsible for any real estate taxes, assessments, fees, or charges levied upon the Property. Grantee shall not be responsible for any costs or liability of any kind related to the ownership, operation, insurance, upkeep, or maintenance of the Property, except as expressly provided herein. Upkeep of any constructed bridges, fences, or other amenities on the Property are the sole responsibility of the Grantor. Nothing herein shall relieve the Grantor of the obligation to comply with federal, state or local laws, regulations and permits that may apply to the exercise of the Reserved Rights.

C. Any notices shall be sent by registered or certified mail, return receipt requested to the parties at their addresses shown herein or to other addresses as either party establishes in writing upon notification to the other.

D. Grantor shall notify Grantee in writing of the name and address and any party to whom the Property or any part thereof is to be transferred at or prior to the time said transfer is made. Grantor further agrees that any subsequent lease, deed, or other legal instrument by which any interest in the Property is conveyed subject to the Conservation Easement herein created.

E. The Grantor and Grantee agree that the terms of this Conservation Easement shall survive any merger of the fee and easement interests in the Property or any portion thereof.

F. This Conservation Easement and Right of Access may be amended, but only in writing signed by all parties hereto, or their successors or assigns, if such amendment does not affect the qualification of this Conservation Easement or the status of the Grantee under any applicable laws, and is consistent with the purposes of the Conservation Easement. The owner of the Property shall notify the U.S. Army Corps of Engineers in writing sixty (60) days prior to the initiation of any transfer of all or any part of the Property. Such notification shall be addressed to: Justin McCorkle, General Counsel, US Army Corps of Engineers, 69 Darlington Avenue, Wilmington, NC 28403

G. The parties recognize and agree that the benefits of this Conservation Easement are in gross and assignable provided, however, that the Grantee hereby covenants and agrees, that in the event it transfers or assigns this Conservation Easement, the organization receiving the interest will be a qualified holder under N.C. Gen. Stat. § 121-34 et seq. and § 170(h) of the Internal Revenue Code, and the Grantee further covenants and agrees that the terms of the transfer or assignment will be such that the transferee or assignee will be required to continue in perpetuity the conservation purposes described in this document.

VI. QUIET ENJOYMENT

Grantor reserves all remaining rights accruing from ownership of the Property, including the right to engage in or permit or invite others to engage in only those uses of the Easement Area that are expressly reserved herein, not prohibited or restricted herein, and are not inconsistent with the purposes of this Conservation Easement. Without limiting the generality of the foregoing, the Grantor expressly reserves to the Grantor, and the Grantor's invitees and licensees, the right of access to the Easement Area, and the right of quiet enjoyment of the Easement Area

TO HAVE AND TO HOLD, the said rights and easements perpetually unto the State of North Carolina for the aforesaid purposes.

AND Grantor covenants that Grantor is seized of said premises in fee and has the right to convey the permanent Conservation Easement herein granted; that the same is free from encumbrances and that Grantor will warrant and defend title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the Grantor has hereunto set his hand and seal, the day and year first above written.

_____ (SEAL)

NORTH CAROLINA
COUNTY OF _____

I, _____, a Notary Public in and for the County and State aforesaid, do hereby certify that _____, Grantor, personally appeared before me this day and acknowledged the execution of the foregoing instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and Notary Seal this the _____ day of _____, 2011.

_____
Notary Public

My commission expires:

_____

Exhibit A

[INSERT LEGAL DESCRIPTION]

APPENDIX 9. Additional Data

HEC-RAS Analysis
Channel Stability Assessment (HEC-20) Forms & Figure
Onsite Streamflow Gage Data & Figure

Duplicate Effective 100-year HEC-RAS Output Summary Table

River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Enc Sta L (ft)	Enc Sta R (ft)
21838	100-year	582	474.99	482.06	481.48	5.37	268.58	182.45		
21838	100-FW	582	474.99	482.6	481.42	5.52	193.45	64	4963	5027
21161	100-year	582	471.81	479.75		3.7	629.48	346.85		
21161	100-FW	582	471.81	480.53		3.76	478.01	139.95	4892.05	5032
20502	100-year	933	470.93	478.35		3.29	961.01	489.67		
20502	100-FW	933	470.93	479.31		3.34	744.08	226.5	4876.97	5103.47
20251	100-year	933	470.81	477.72		3.79	999.49	549.9		
20251	100-FW	933	470.81	478.55		5.41	546.82	185.73	4876.97	5062.7
19776	100-year	933	470.7	476.95		2.05	1259.93	645.66		
19776	100-FW	933	470.7	477.66		2.23	854.18	262.34	4769.66	5032
19200	100-year	1108	468.32	476.17		3.4	1440.16	708.29		
19200	100-FW	1108	468.32	476.89		3.61	1102.21	343.09	4856.46	5199.55
18793	100-year	1233	467.86	475.33		4.29	1300.66	653.34		
18793	100-FW	1233	467.86	476.05		4.55	966.18	294.93	4955.63	5250.56
18236	100-year	1233	465.5	473.95		5.23	1018.36	353.72		
18236	100-FW	1233	465.5	474.68		5.49	775.25	174.67	4926.9	5101.57
17849	100-year	1233	464.26	472.7		6.48	732.21	316.73		
17849	100-FW	1233	464.26	473.46		6.69	591.64	154.01	4903.24	5057.25
17444	100-year	1233	463.6	471.99	468.95	4.03	734.83	229.7		
17444	100-FW	1233	463.6	472.92	468.94	3.75	607.37	100	4955	5055
17407		Culvert								
17367	100-year	1233	463.42	471.04	469.41	5.03	588.82	221.93		
17367	100-FW	1233	463.42	471.75	469.39	4.96	470.07	100	4955	5055
17109	100-year	1233	461.96	470.39		6.14	581.68	290.49		
17109	100-FW	1233	461.96	471.09		6.51	392.46	95.91	4937.19	5033.1
16777	100-year	1233	460.46	469.33		5.3	572.35	215.24		
16777	100-FW	1233	460.46	470.05		5.59	416.41	87.12	4944.98	5032.1
16269	100-year	1233	459.4	468.45		3.54	919.24	385.8		
16269	100-FW	1233	459.4	469.22		3.68	671.24	149.21	4904.43	5053.64
15859	100-year	1263	459.4	467.97	465.3	3.86	860.03	276.71		
15859	100-FW	1263	459.4	468.77	465.31	3.89	628.93	100	4950	5050
15824		Culvert								
15797	100-year	1263	459.32	466.79	465.82	6.63	464.19	213.34		
15797	100-FW	1263	459.32	467.47	465.82	6.1	417.51	100	4950	5050
15469	100-year	1263	457.07	466.22		4.05	874.01	368.55		
15469	100-FW	1263	457.07	466.97		4.21	652.42	162.81	4976.7	5139.51
14930	100-year	1574	455.8	464.63		6.85	603.93	246.64		

14930	100-FW	1574	455.8	465.33		7.24	456.82	114.8	4958.59	5073.39
14403	100-year	1574	454.73	462.94		6.09	792.48	376.4		
14403	100-FW	1574	454.73	463.63		6.46	510.37	111.45	4923.15	5034.6
13921	100-year	1574	452.92	462.32		3.75	1126.34	349.36		
13921	100-FW	1574	452.92	463.06		3.92	855.82	162.37	4872.23	5034.6
13474	100-year	1574	451.34	461.4		6.71	770.03	321.43		
13474	100-FW	1574	451.34	462.07		7.08	508.77	103.55	4931.05	5034.6
12995	100-year	1574	451.02	460.14		5.52	920.91	384.48		
12995	100-FW	1574	451.02	460.83		5.83	701.16	190.69	4975	5165.69
12666	100-year	1574	450.31	459.43		5.17	870.09	277.26		
12666	100-FW	1574	450.31	460.13		5.45	699.11	151.25	4979.5	5130.75
12177	100-year	1574	449.53	458.4		5.19	945.58	371.75		
12177	100-FW	1574	449.53	459.1		5.47	776.56	197.68	4870.33	5068.01
11849	100-year	1574	448.76	457.92		3.9	1393.84	565.32		
11849	100-FW	1574	448.76	458.63		4.1	977.44	222.83	4810.77	5033.6
11417	100-year	1720	447.66	457.06		5.8	1101.59	334.55		
11417	100-FW	1720	447.66	457.74		6.12	882.81	176.56	4858.74	5035.3
11002	100-year	1720	446.95	456.33		4.72	1357.13	371.79		
11002	100-FW	1720	446.95	457.02		4.97	1070.45	199.83	4870.58	5070.41
10610	100-year	1720	446.19	455.75		4.38	1395.82	343.71		
10610	100-FW	1720	446.19	456.44		4.61	1092.91	177.96	4864.25	5042.21
10187	100-year	1720	446	455.27	451.91	4.01	1596.07	436.15		
10187	100-FW	1720	446	455.8	451.91	4.8	927.46	145.42	4894.08	5039.5

Corrective Effective 100-year HEC-RAS Output Summary Table

River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Enc Sta L (ft)	Enc Sta R (ft)
21838	100-year	582	474.99	482.06	481.48	5.37	268.58	182.45		
21838	100-FW	582	474.99	482.6	481.42	5.52	193.45	64	4963	5027
21161	100-year	582	471.81	479.75		3.7	629.48	346.85		
21161	100-FW	582	471.81	480.53		3.76	478.01	139.95	4892.05	5032
20502	100-year	933	470.93	478.35		3.29	961.01	489.67		
20502	100-FW	933	470.93	479.31		3.34	744.08	226.5	4876.97	5103.47
20251	100-year	933	470.81	477.72		3.79	999.49	549.9		
20251	100-FW	933	470.81	478.55		5.42	546.8	185.73	4876.97	5062.7
19776	100-year	933	470.7	476.95		2.05	1259.91	645.66		
19776	100-FW	933	470.7	477.66		2.23	854.05	262.34	4769.66	5032
19200	100-year	1108	468.32	476.17		3.4	1440.08	708.28		
19200	100-FW	1108	468.32	476.89		3.61	1101.85	343.09	4856.46	5199.55
18793	100-year	1233	467.86	475.33		4.29	1300.38	653.29		
18793	100-FW	1233	467.86	476.05		4.56	965.48	294.93	4955.63	5250.56
18236	100-year	1233	465.5	473.95		5.24	1017.07	353.65		
18236	100-FW	1233	465.5	474.67		5.51	772.95	174.67	4926.9	5101.57
17849	100-year	1233	464.26	472.68		6.54	725.31	315.67		
17849	100-FW	1233	464.26	473.41		6.77	585.23	154.01	4903.24	5057.25
17444	100-year	1233	463.6	471.95	468.95	4.09	724.66	228.56		
17444	100-FW	1233	463.6	472.86	468.94	3.79	601.7	100	4955	5055
17407		Culvert								
17367	100-year	1233	463.45	470.28	469.48	3.93	431.61	199.81		
17367	100-FW	1233	463.45	470.8	469.48	3.89	363.23	100	4955	5055
17109	100-year	1233	464.2	469.45		4.64	360.75	240.27		
17109	100-FW	1233	464.2	470.08		4.45	299.2	95.91	4937.19	5033.1
16927	100-year	1233	463.47	468.92		3.68	415.49	203.45		
16927	100-FW	1233	463.47	469.57		4.21	309.35	88.5	5059.82	5148.32
16777	100-year	1233	462.42	468.54		3.63	412.67	197.12		
16777	100-FW	1233	462.42	469.23		3.79	333.13	87.12	4944.98	5032.1
16520	100-year	1233	461.56	468.03		3.26	511.08	278.4		
16520	100-FW	1233	461.56	468.51		4.24	299.15	88.07	4870.71	4958.78
16269	100-year	1233	460.97	467.79		2.25	701.7	319.47		
16269	100-FW	1233	460.97	468.29		2.42	541.53	149.21	4904.43	5053.64
16069	100-year	1233	460.72	467.66		2.2	685.5	248.38		
16069	100-FW	1233	460.72	468.08		2.59	444.03	101.56	4873.33	4974.89
15859	100-year	1263	460.94	467.53	464.8	2.27	711.28	261.16		
15859	100-FW	1263	460.94	467.91	464.8	2.7	493.07	100	4950	5050

15824		Culvert								
15797	100-year	1263	458.99	465.7	465.5	10.92	115.63	161.55		
15797	100-FW	1263	458.99	466.27	465.5	5.33	277.36	100	4950	5050
15469	100-year	1263	457.71	465		3.14	521.24	300.85		
15469	100-FW	1263	457.71	465.67		2.82	500.27	162.81	4976.7	5139.51
15161	100-year	1263	457.38	464.51		3.15	566.6	287.05		
15161	100-FW	1263	457.38	465.08		3.99	371.75	117.75	4895.23	5012.98
14930	100-year	1574	457.15	463.6		6	379.07	223.85		
14930	100-FW	1574	457.15	464.1		5.86	324.71	114.8	4958.59	5073.39
14645	100-year	1574	455.97	462.95		3.62	588.61	371.14		
14645	100-FW	1574	455.97	463.77		2.98	536.82	153.19	4952.57	5105.76
14433	100-year	1574	457.42	462.66		2.85	665.75	372.34		
14433	100-FW	1574	457.42	463.44		3.51	454.46	110.31	4939.96	5050.27
14403	100-year	1574	456.34	462.64		2.54	713.19	350.49		
14403	100-FW	1574	456.34	463.42		3.08	473.3	111.45	4923.15	5034.6
14180	100-year	1574	455.44	462.53		1.88	898.88	370.31		
14180	100-FW	1574	455.44	463.32		2.21	685.36	178.13	4900.47	5078.6
13921	100-year	1574	453.23	462.47		1.48	1130.49	355.08		
13921	100-FW	1574	453.23	463.26		1.64	847.06	162.37	4872.23	5034.6
13741	100-year	1574	452.97	462.18		4.4	728.66	301.3		
13741	100-FW	1574	452.97	462.87		4.95	438.54	84.21	4838.64	4922.85
13474	100-year	1574	451.34	461.4		6.71	770.03	321.43		
13474	100-FW	1574	451.34	462.07		7.08	508.77	103.55	4931.05	5034.6
12995	100-year	1574	451.02	460.14		5.52	920.91	384.48		
12995	100-FW	1574	451.02	460.83		5.83	701.16	190.69	4975	5165.69
12666	100-year	1574	450.31	459.43		5.17	870.09	277.26		
12666	100-FW	1574	450.31	460.13		5.45	699.11	151.25	4979.5	5130.75
12177	100-year	1574	449.53	458.4		5.19	945.58	371.75		
12177	100-FW	1574	449.53	459.1		5.47	776.56	197.68	4870.33	5068.01
11849	100-year	1574	448.76	457.92		3.9	1393.84	565.32		
11849	100-FW	1574	448.76	458.63		4.1	977.44	222.83	4810.77	5033.6
11417	100-year	1720	447.66	457.06		5.8	1101.59	334.55		
11417	100-FW	1720	447.66	457.74		6.12	882.81	176.56	4858.74	5035.3
11002	100-year	1720	446.95	456.33		4.72	1357.13	371.79		
11002	100-FW	1720	446.95	457.02		4.97	1070.45	199.83	4870.58	5070.41
10610	100-year	1720	446.19	455.75		4.38	1395.82	343.71		
10610	100-FW	1720	446.19	456.44		4.61	1092.91	177.96	4864.25	5042.21
10187	100-year	1720	446	455.27	451.91	4.01	1596.07	436.15		
10187	100-FW	1720	446	455.8	451.91	4.8	927.46	145.42	4894.08	5039.5

Proposed Conditions 100-year HEC-RAS Output Summary Table

River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Enc Sta L (ft)	Enc Sta R (ft)
21838	100-year	582	474.99	482.06	481.48	5.37	268.58	182.45		
21838	100-FW	582	474.99	482.6	481.42	5.52	193.45	64	4963	5027
21161	100-year	582	471.81	479.75		3.7	629.48	346.85		
21161	100-FW	582	471.81	480.53		3.76	478.01	139.95	4892.05	5032
20502	100-year	933	470.93	478.35		3.29	961.01	489.67		
20502	100-FW	933	470.93	479.31		3.34	744.08	226.5	4876.97	5103.47
20251	100-year	933	470.81	477.72		3.79	999.49	549.9		
20251	100-FW	933	470.81	478.55		5.42	546.81	185.73	4876.97	5062.7
19776	100-year	933	470.7	476.95		2.05	1259.95	645.67		
19776	100-FW	933	470.7	477.66		2.23	854.1	262.34	4769.66	5032
19200	100-year	1108	468.32	476.17		3.4	1440.2	708.3		
19200	100-FW	1108	468.32	476.89		3.61	1102.03	343.09	4856.46	5199.55
18793	100-year	1233	467.86	475.33		4.29	1300.88	653.38		
18793	100-FW	1233	467.86	476.05		4.55	965.81	294.93	4955.63	5250.56
18236	100-year	1233	465.5	473.95		5.23	1019.27	353.78		
18236	100-FW	1233	465.5	474.67		5.5	774.05	174.67	4926.9	5101.57
17849	100-year	1233	464.26	472.71		6.43	736.77	319.29		
17849	100-FW	1233	464.26	473.44		6.72	589.08	154.01	4903.24	5057.25
17444	100-year	1233	463.6	472.02	468.95	4	741.35	230.42		
17444	100-FW	1233	463.6	472.9	468.94	3.77	605.12	100	4955	5055
17407		Culvert								
17367	100-year	1233	465.62	470.58	470	4.91	487.89	208.55		
17367	100-FW	1233	465.62	471.23	470	5.02	397.61	100	4955	5055
17109	100-year	1233	464.71	469.96		3.34	664.79	290.53		
17109	100-FW	1233	464.71	470.53		3.95	478.13	110	4904	5014
16927	100-year	1233	464.06	469.42		4.73	533.29	221.97		
16927	100-FW	1233	464.06	469.98		4.88	455.65	117.06	5001.41	5118.47
16777	100-year	1233	463.54	468.63		5.83	432.05	199.25		
16777	100-FW	1233	463.54	469.46		5.1	454.9	124.98	4909.87	5034.85
16520	100-year	1233	462.66	468.06		3.04	645.85	279.51		
16520	100-FW	1233	462.66	468.9		3.47	494.07	109.69	4860.16	4969.85
16269	100-year	1233	461.52	467.64		3.51	706.68	307.69		
16269	100-FW	1233	461.52	468.42		4.1	585.27	137.78	4877.52	5015.3
16069	100-year	1233	460.87	467.42		2.83	827.89	253.16		
16069	100-FW	1233	460.87	468.1		3.83	582.28	120	4830	4950
15859	100-year	1263	460.24	467.22	465.06	2.73	628.16	245.62		
15859	100-FW	1263	460.24	467.91	465.06	2.81	486.98	100	4950.33	5050.33

15824		Culvert								
15797	100-year	1263	459.16	465.19	464.84	11.06	123.24	144.98		
15797	100-FW	1263	459.16	466.19	464.84	6.65	335.01	100	4961.8	5061.8
15469	100-year	1263	458.45	464.83		3.17	734.85	294		
15469	100-FW	1263	458.45	465.72		2.96	737.6	162.81	4998.27	5161.08
15161	100-year	1263	458.56	464.63		2.32	995.7	290.72		
15161	100-FW	1263	458.56	465.57		2.34	905.33	177.04	4921.16	5098.2
14930	100-year	1574	457.71	464.27		4.05	699.07	236.02		
14930	100-FW	1574	457.71	465.24		4.18	678.11	138.72	4922.25	5060.97
14645	100-year	1574	457.3	464.08		2.17	1102.73	416.86		
14645	100-FW	1574	457.3	464.96		3.03	825.66	165.76	4940	5105.76
14433	100-year	1574	456.85	464.03	462.16	1.22	1324.43	441.9		
14433	100-FW	1574	456.85	464.92	462.15	1.29	966.32	169.86	4906.8	5076.66
14418		Culvert								
14403	100-year	1574	456.85	462.68	461.76	3.02	807.96	356.93		
14403	100-FW	1574	456.85	463.61	461.78	4.61	543.85	111.45	4949.93	5061.38
14180	100-year	1574	455.42	462.55		2.03	1192.83	371.08		
14180	100-FW	1574	455.42	463.47		2.69	973.86	178.13	4894.49	5072.62
13921	100-year	1574	453.6	462.49		1.64	1509.71	355.95		
13921	100-FW	1574	453.6	463.35		2.51	1148.72	162.37	4811.67	4974.04
13741	100-year	1574	452.97	462.18		4.4	728.66	301.3		
13741	100-FW	1574	452.97	462.87		4.95	438.54	84.21	4838.64	4922.85
13474	100-year	1574	451.34	461.4		6.71	770.03	321.43		
13474	100-FW	1574	451.34	462.07		7.08	508.77	103.55	4931.05	5034.6
12995	100-year	1574	451.02	460.14		5.52	920.91	384.48		
12995	100-FW	1574	451.02	460.83		5.83	701.16	190.69	4975	5165.69
12666	100-year	1574	450.31	459.43		5.17	870.09	277.26		
12666	100-FW	1574	450.31	460.13		5.45	699.11	151.25	4979.5	5130.75
12177	100-year	1574	449.53	458.4		5.19	945.58	371.75		
12177	100-FW	1574	449.53	459.1		5.47	776.56	197.68	4870.33	5068.01
11849	100-year	1574	448.76	457.92		3.9	1393.84	565.32		
11849	100-FW	1574	448.76	458.63		4.1	977.44	222.83	4810.77	5033.6
11417	100-year	1720	447.66	457.06		5.8	1101.59	334.55		
11417	100-FW	1720	447.66	457.74		6.12	882.81	176.56	4858.74	5035.3
11002	100-year	1720	446.95	456.33		4.72	1357.13	371.79		
11002	100-FW	1720	446.95	457.02		4.97	1070.45	199.83	4870.58	5070.41
10610	100-year	1720	446.19	455.75		4.38	1395.82	343.71		
10610	100-FW	1720	446.19	456.44		4.61	1092.91	177.96	4864.25	5042.21
10187	100-year	1720	446	455.27	451.91	4.01	1596.07	436.15		
10187	100-FW	1720	446	455.8	451.91	4.8	927.46	145.42	4894.08	5039.5

Existing Conditions Bankfull HEC-RAS Output Summary Table

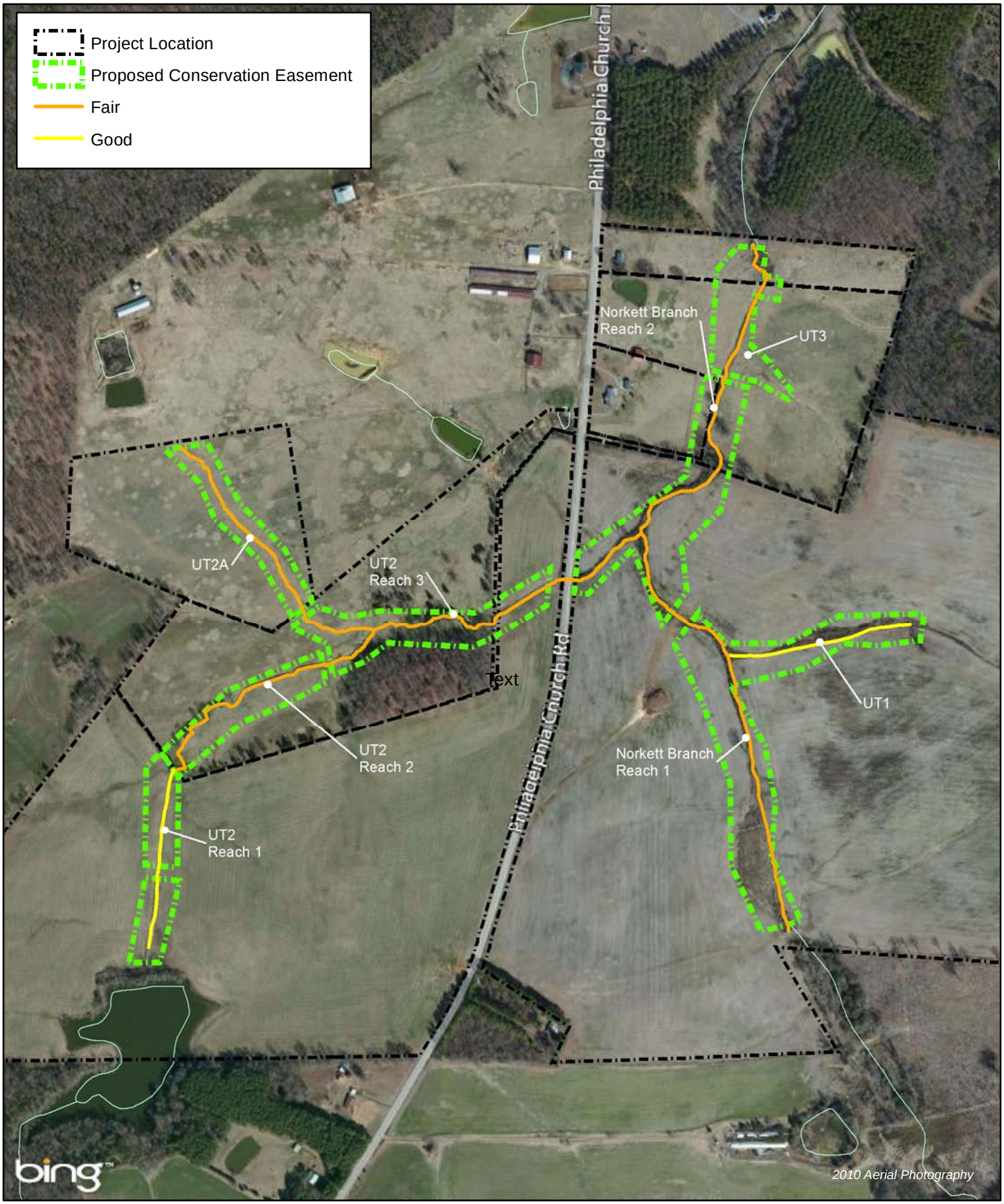
River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	Shear Chan (lb/sq ft)	Power Chan (lb/ft s)
21838	BKF	120	474.99	480.14	479.32	4.36	48.26	34.79	0.38	0.85	3.71
21161	BKF	120	471.81	478		2.79	166.23	204.13	0.22	0.32	0.9
20502	BKF	120	470.93	476.65		2.74	204.33	368.59	0.23	0.32	0.89
20251	BKF	120	470.81	476.12		2.56	240.59	382.1	0.22	0.29	0.74
19776	BKF	120	470.7	474.96		2.42	172.59	309.47	0.24	0.29	0.69
19200	BKF	120	468.32	473.75		2.54	172.26	195.2	0.21	0.27	0.67
18793	BKF	120	467.86	471.88		5.71	25.52	17.66	0.55	1.47	8.38
18236	BKF	120	465.5	470.03		3.03	100.33	59.5	0.27	0.36	1.1
17849	BKF	120	464.26	468.77		4.34	43.77	23.88	0.39	0.77	3.36
17444	BKF	120	463.6	468.64	464.96	1.34	108.68	72.22	0.11	0.06	0.08
17407		Culvert									
17367	BKF	120	463.45	467.72	465.59	1.98	62.33	55.55	0.21	0.2	0.4
17109	BKF	120	464.2	467.21		2.35	53.76	46.18	0.32	0.33	0.78
16927	BKF	120	463.47	466.57		2.57	50.79	50.37	0.34	0.39	1
16777	BKF	120	462.42	466.27		1.67	81.18	77.33	0.22	0.16	0.28
16520	BKF	120	461.56	465.74		2.3	57.04	75.07	0.28	0.3	0.68
16269	BKF	120	460.97	465.6		1.05	154.03	143.69	0.11	0.06	0.06
16069	BKF	120	460.72	465.57		0.71	232.84	172.83	0.07	0.02	0.02
15859	BKF	140	460.94	465.53	462.29	0.87	160.46	162.16	0.08	0.03	0.03
15824		Culvert									
15797	BKF	140	458.99	462.72	461.23	3.26	42.93	18.23	0.37	0.59	1.92
15469	BKF	140	457.71	461.98		2.04	68.52	25.11	0.22	0.22	0.45
15161	BKF	140	457.38	461.36		2.64	53.12	20.91	0.29	0.37	0.98
14930	BKF	140	457.15	460.47		3.39	41.36	19.44	0.41	0.65	2.18
14645	BKF	140	455.97	459.87		2.01	69.53	26.26	0.22	0.21	0.43
14433	BKF	140	457.42	459.4		2.32	60.47	40.15	0.33	0.33	0.76
14403	BKF	140	456.34	459.32		2.23	62.69	34.32	0.29	0.29	0.65
14180	BKF	140	455.44	458.34		3.1	45.13	31	0.45	0.61	1.88
13921	BKF	140	453.23	457.66		2.28	64.01	33.99	0.23	0.26	0.6
13741	BKF	140	452.97	457.2		2.74	51.02	21.39	0.31	0.41	1.13
13474	BKF	140	451.34	456.7		2.74	73.42	32.22	0.22	0.28	0.77
12995	BKF	140	451.02	455.83		3.33	52.54	22.42	0.28	0.44	1.45
12666	BKF	140	450.31	455.21		3.07	61.69	25.87	0.25	0.36	1.1
12177	BKF	140	449.53	454.15		3.48	49.24	22.15	0.3	0.48	1.69
11849	BKF	140	448.76	453.15		3.76	42.72	18.75	0.34	0.58	2.17
11417	BKF	150	447.66	452.23		3.01	78.78	42.22	0.26	0.35	1.04
11002	BKF	150	446.95	451.34		3.41	63.76	66.49	0.3	0.46	1.58
10610	BKF	150	446.19	450.22		3.59	76.25	99.45	0.33	0.53	1.9
10187	BKF	150	446	449.69	447.37	2.04	101.86	66.15	0.19	0.16	0.33

Proposed Conditions Bankfull HEC-RAS Output Summary Table

River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	Shear Chan (lb/sq ft)	Power Chan (lb/ft s)
21838	BKF	120	474.99	480.14	479.32	4.36	48.26	34.79	0.38	0.85	3.71
21161	BKF	120	471.81	478		2.79	166.23	204.13	0.22	0.32	0.9
20502	BKF	120	470.93	476.65		2.74	204.33	368.59	0.23	0.32	0.89
20251	BKF	120	470.81	476.12		2.56	240.59	382.1	0.22	0.29	0.74
19776	BKF	120	470.7	474.96		2.42	172.58	309.46	0.24	0.29	0.69
19200	BKF	120	468.32	473.75		2.54	172.29	195.23	0.21	0.27	0.67
18793	BKF	120	467.86	471.89		5.71	25.57	17.69	0.55	1.46	8.35
18236	BKF	120	465.5	470.03		3.04	100.06	59.41	0.27	0.36	1.11
17849	BKF	120	464.26	468.72		4.4	42.72	23.53	0.4	0.8	3.53
17444	BKF	120	463.6	468.59	464.96	1.35	107.39	70.51	0.11	0.06	0.09
17407		Culvert									
17367	BKF	120	465.62	467.63	466.75	3.06	41.14	49.85	0.4	0.54	1.65
17109	BKF	120	464.71	467.07		1.47	103.04	139.02	0.18	0.12	0.18
16927	BKF	120	464.06	466.66		2.34	67.71	122.54	0.29	0.31	0.73
16777	BKF	120	463.54	465.88		3.44	34.87	20.91	0.47	0.72	2.46
16520	BKF	120	462.66	465.7		0.98	157.23	135.4	0.12	0.05	0.05
16269	BKF	120	461.52	465.58		1.17	202.93	155.54	0.11	0.07	0.08
16069	BKF	120	460.87	465.56		0.62	392.64	208.39	0.06	0.02	0.01
15859	BKF	140	460.24	465.53	461.91	0.96	152.13	162.06	0.08	0.04	0.04
15824		Culvert									
15797	BKF	140	459.16	462.48	461.05	2.82	50.24	26.88	0.33	0.44	1.23
15469	BKF	140	458.45	461.8		1.65	101.36	146.03	0.2	0.15	0.25
15161	BKF	140	458.56	461.71		0.95	256.29	231.69	0.11	0.05	0.04
14930	BKF	140	457.71	461.58		1.45	173.34	136.34	0.15	0.11	0.15
14645	BKF	140	457.3	461.49		1.04	250.7	162.49	0.1	0.05	0.05
14433	BKF	140	456.85	461.4	458.38	1.28	108.97	234.46	0.12	0.08	0.1
14418		Culvert									
14403	BKF	140	456.85	459.37	458.54	2.59	54	111.57	0.37	0.42	1.08
14180	BKF	140	455.42	457.75		3.69	37.96	22.36	0.5	0.82	3.01
13921	BKF	140	453.6	457.54		1.36	209.46	164.74	0.14	0.09	0.13
13741	BKF	140	452.97	457.2		2.74	51.02	21.39	0.31	0.41	1.13
13474	BKF	140	451.34	456.7		2.74	73.42	32.22	0.22	0.28	0.77
12995	BKF	140	451.02	455.83		3.33	52.54	22.42	0.28	0.44	1.45
12666	BKF	140	450.31	455.21		3.07	61.69	25.87	0.25	0.36	1.1
12177	BKF	140	449.53	454.15		3.48	49.24	22.15	0.3	0.48	1.69
11849	BKF	140	448.76	453.15		3.76	42.72	18.75	0.34	0.58	2.17
11417	BKF	150	447.66	452.23		3.01	78.78	42.22	0.26	0.35	1.04
11002	BKF	150	446.95	451.34		3.41	63.76	66.49	0.3	0.46	1.58
10610	BKF	150	446.19	450.22		3.59	76.25	99.45	0.33	0.53	1.9
10187	BKF	150	446	449.69	447.37	2.04	101.86	66.15	0.19	0.16	0.33

Channel Shear Stress Comparison Table

		Existing Conditions			Proposed Conditions			Difference		
River Sta	Q Total	Vel Chnl	Shear Chan	Power Chan	Vel Chnl	Shear Chan	Power Chan	Vel Chnl	Shear Chan	Power Chan
	(cfs)	(ft/s)	(lb/sq ft)	(lb/ft s)	(ft/s)	(lb/sq ft)	(lb/ft s)	(ft/s)	(lb/sq ft)	(lb/ft s)
17367	120	1.98	0.2	0.4	3.06	0.54	1.65	1.08	0.34	1.25
17109	120	2.35	0.33	0.78	1.47	0.12	0.18	-0.88	-0.21	-0.6
16927	120	2.57	0.39	1	2.34	0.31	0.73	-0.23	-0.08	-0.27
16777	120	1.67	0.16	0.28	3.44	0.72	2.46	1.77	0.56	2.18
16520	120	2.3	0.3	0.68	0.98	0.05	0.05	-1.32	-0.25	-0.63
16269	120	1.05	0.06	0.06	1.17	0.07	0.08	0.12	0.01	0.02
16069	120	0.71	0.02	0.02	0.62	0.02	0.01	-0.09	0	-0.01
15859	140	0.87	0.03	0.03	0.96	0.04	0.04	0.09	0.01	0.01
15824	Culvert									
15797	140	3.26	0.59	1.92	2.82	0.44	1.23	-0.44	-0.15	-0.69
15469	140	2.04	0.22	0.45	1.65	0.15	0.25	-0.39	-0.07	-0.2
15161	140	2.64	0.37	0.98	0.94	0.05	0.04	-1.7	-0.32	-0.94
14930	140	3.39	0.65	2.18	1.45	0.11	0.15	-1.94	-0.54	-2.03
14645	140	2.01	0.21	0.43	1.05	0.05	0.05	-0.96	-0.16	-0.38
14433	140	2.32	0.33	0.76	1.32	0.08	0.1	-1	-0.25	-0.66
14418	Proposed Culvert									
14403	140	2.23	0.29	0.65	2.66	0.44	1.18	0.43	0.15	0.53
14180	140	3.1	0.61	1.88	3.68	0.81	2.99	0.58	0.2	1.11
13921	140	2.28	0.26	0.6	1.34	0.09	0.12	-0.94	-0.17	-0.48



WILDLANDS ENGINEERING

0 300 600 Feet

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HEC-20 Scoring Map
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC

Stream: Norkett Reach 1
Reach:
Date: 8/16/12
Weather: Partly Cloudy
Location:

Observers: I E/NM
Project:
Drainage Area:
Stream Type

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
1. Watershed and flood plain activity and characteristics	Stable, forested, undisturbed watershed	Occasional minor disturbances in the watershed, including cattle activity (grazing and/or access to stream), construction, logging, or other minor deforestation. Limited agricultural activities	Frequent disturbances in the watershed, including cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Urbanization over significant portion of watershed	Continual disturbances in the watershed. Significant cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Highly urbanized or rapidly urbanizing watershed	10
2. Flow habit	Perennial stream with no flashy behavior	Perennial stream or ephemeral first-order stream with slightly increased rate of flooding	Perennial or intermittent stream with flashy behavior	Extremely flashy; flash floods prevalent mode of discharge; ephemeral stream other than first-order stream	4
3. Channel pattern	No evidence of channelization. Meandering, stable channel or straight (step-pool system, narrow valley), stable channel.	Appears to have previously been channelized. Stream is relatively stable. Channel has some meanders due to previous channel adjustment.	Appears to have previously been channelized. Stream is actively adjusting (meandering); localized areas of instability and/or erosion around bends. Straightened, stable channel.	Appears to have previously been channelized. Stream is actively adjusting (laterally and/or vertically) with few bends. Straight, unstable reach.	9
4. Entrenchment/ channel confinement	Active flood plain exists at top of banks; no sign of undercutting infrastructure; no levees	Active flood plain abandoned, but is currently rebuilding; minimal channel confinement; infrastructure not exposed; levees are low and set well back from the river	Moderate confinement in valley or channel walls; some exposure of infrastructure; terraces exist; flood plain abandoned; levees are moderate in size and have minimal setback from the river	Knickpoints visible downstream; exposed water lines or other infrastructure; channel-width-to-top-of-banks ration small; deeply confined; no active flood plain; levees are high and along the channel edge	6
5. Bed material Fs = approximate portion of sand in the bed	Assorted sized tightly packed, overlapping, and possibly imbricated. Most material > 4 mm. Fs < 20%	Moderately packed with some overlapping. Very small amounts of material < 4 mm. 20 < Fs < 50%	Loose assortment with no apparent overlap. Small to medium amounts of material < 4 mm. 50 < Fs < 70%	Very loose assortment with no packing. Large amounts of material < 4 mm. Fs > 70%	5
6. Bar development	For S < 0.02 and w/y > 12, bars are mature, narrow relative to stream width at low flow, well-vegetated, and composed of coarse gravel to cobbles. For S > 0.02 and w/y are < 12, no bars are evident	For S < 0.02 and w/y > 12, bars may have vegetation and/or be composed of coarse gravel to cobbles, but minimal recent growth of bar evident by lack of vegetation on portions of the bar. For S > 0.02 and w/y <12, no bars are evident	For S < 0.02 and w/y > 12, bar widths tend to be wide and composed of newly deposited coarse sand to small cobbles and/or may be sparsely vegetated. Bars forming for S > 0.02 and w/y < 12	Bar widths are generally greater than 1/2 the stream width at low flow. Bars are composed of extensive deposits of fine particles up to coarse gravel with little to no vegetation. No bars for S < 0.02 and w/y > 12	7
7. Obstructions, including bedrock outcrops, armor layer, LED jams, grade control, bridge bed paving, revetments, dikes or vanes, riprap	Rare or not present	Occasional, causing cross currents and minor bank and bottom erosion	Moderately frequent and occasionally unstable obstructions, cause noticeable erosion of the channel. Considerable sediment accumulation behind obstructions	Frequent and often unstable, causing a continual shift of sediment and flow. Traps are easily filled, causing channel to migrate and/or widen	4

Norkett Reach 1

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
8. Bank soil texture and coherence	Clay and silty clay; cohesive material	Clay loam to sandy clay loam; minor amounts of noncohesive or unconsolidated mixtures; layers may exist, but are cohesive materials	Sandy clay to sandy loam; unconsolidated mixtures of glacial or other materials; small layers and lenses of noncohesive or unconsolidated mixtures	Loamy sand to sand; noncohesive material; unconsolidated mixtures of glacial or other materials; layers of lenses that include noncohesive sands and gravels	5
9. Average bank slope angle (where 90° is a vertical bank)	Bank slopes < 3H:1V (18°) for noncohesive or unconsolidated materials to < 1:1 (45°) in clays on both sides	Bank slopes up to 2H:1V (27°) in noncohesive or unconsolidated materials to 0.8:1 (50°) in clays on one or occasionally both banks	Bank slopes to 1H:1V (45°) in noncohesive or unconsolidated materials to 0.6:1 (60°) in clays common on one or both banks	Bank slopes over 45° in noncohesive or unconsolidated materials or over 60° in clays common on one or both banks	5
10. Vegetative or engineered bank protection	Wide band of woody vegetation with at least 90% density and cover. Primarily hard wood, leafy, deciduous trees with mature, healthy, and diverse vegetation located on the bank. Woody vegetation oriented vertically. In absence of vegetation, both banks are lined or heavily armored	Medium band of woody vegetation with 70-90% plant density and cover. A majority of hard wood, leafy, deciduous trees with maturing, diverse vegetation located on the bank. Wood vegetation oriented 80-90% from horizontal with minimal root exposure. Partial lining or armoring of one or both banks	Small band of woody vegetation with 50-70% plant density and cover. A majority of soft wood, piney, coniferous trees with young or old vegetation lacking in diversity located on or near the top of bank. Woody vegetation oriented at 70-80% from horizontal, often with evident root exposure. No lining of banks, but some armoring may be in place on one bank	Woody vegetation band may vary depending on age and health with less than 50% plant density and cover. Primarily soft wood, piney, coniferous trees with very young, old and dying, and/or monostand vegetation located off of the bank. Woody vegetation oriented at less than 70% from horizontal with extensive root exposure. No lining or armoring of banks	9
11. Bank cutting	Little or none evident. Infrequent raw banks, insignificant percentage of total bank	Some intermittently along channel bends and at prominent constrictions. Raw banks comprise minor portion of bank in vertical direction	Significant and frequent on both banks. Raw banks comprise large portion of bank in vertical direction. Root mat overhangs	Almost continuous cuts on both banks, some extending over most of the banks. Undercutting and sod-root overhangs	7
12. Mass wasting or bank failure	No or little evidence of potential or very small amounts of mass wasting. Uniform channel width over the entire reach	Evidence of infrequent and/or minor mass wasting. Mostly healed over with vegetation. Relatively constant channel width and minimal scalloping of banks	Evidence of frequent and/or significant occurrences of mass wasting that can be aggravated by higher flows, which may cause undercutting and mass wasting of unstable banks. Channel width quite irregular, and scalloping of banks is evident	Frequent and extensive mass wasting. The potential for bank failure, as evidenced by tension cracks, massive undercuttings, and bank slumping is considerable. Channel width is highly irregular, and banks are scalloped	8
13. Upstream distance to bridge from meander impact point and alignment	More than 35 m; bridge is well-aligned with river flow	20-35 m; bridge is aligned with flow	10-20 m; bridge is skewed to flow, or flow alignment is otherwise not centered beneath bridge	Less than 10 m; bridge is poorly aligned with flow	

H = horizontal, V = vertical, Fs = fraction of sand, S = slope, w/y = width-to-depth ratio

Total Score 79

Stream: Norkett Branch
Reach: Reach 2
Date: 8-16-12
Weather: Partly Cloudy
Location:

Observers: IE/NM
Project:
Drainage Area:
Stream Type

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
1. Watershed and flood plain activity and characteristics	Stable, forested, undisturbed watershed	Occasional minor disturbances in the watershed, including cattle activity (grazing and/or access to stream), construction, logging, or other minor deforestation. Limited agricultural activities	Frequent disturbances in the watershed, including cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Urbanization over significant portion of watershed	Continual disturbances in the watershed. Significant cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Highly urbanized or rapidly urbanizing watershed	10
2. Flow habit	Perennial stream with no flashy behavior	Perennial stream or ephemeral first-order stream with slightly increased rate of flooding	Perennial or intermittent stream with flashy behavior	Extremely flashy; flash floods prevalent mode of discharge; ephemeral stream other than first-order stream	4
3. Channel pattern	No evidence of channelization. Meandering, stable channel or straight (step-pool system, narrow valley), stable channel.	Appears to have previously been channelized. Stream is relatively stable. Channel has some meanders due to previous channel adjustment.	Appears to have previously been channelized. Stream is actively adjusting (meandering); localized areas of instability and/or erosion around bends. Straightened, stable channel.	Appears to have previously been channelized. Stream is actively adjusting (laterally and/or vertically) with few bends. Straight, unstable reach.	11
4. Entrenchment/ channel confinement	Active flood plain exists at top of banks; no sign of undercutting infrastructure; no levees	Active flood plain abandoned, but is currently rebuilding; minimal channel confinement; infrastructure not exposed; levees are low and set well back from the river	Moderate confinement in valley or channel walls; some exposure of infrastructure; terraces exist; flood plain abandoned; levees are moderate in size and have minimal setback from the river	Knickpoints visible downstream; exposed water lines or other infrastructure; channel-width-to-top-of-banks ration small; deeply confined; no active flood plain; levees are high and along the channel edge	8
5. Bed material Fs = approximate portion of sand in the bed	Assorted sized tightly packed, overlapping, and possibly imbricated. Most material > 4 mm. Fs < 20%	Moderately packed with some overlapping. Very small amounts of material < 4 mm. 20 < Fs < 50%	Loose assortment with no apparent overlap. Small to medium amounts of material < 4 mm. 50 < Fs < 70%	Very loose assortment with no packing. Large amounts of material < 4 mm. Fs > 70%	5
6. Bar development	For S < 0.02 and w/y > 12, bars are mature, narrow relative to stream width at low flow, well-vegetated, and composed of coarse gravel to cobbles. For S > 0.02 and w/y are < 12, no bars are evident	For S < 0.02 and w/y > 12, bars may have vegetation and/or be composed of coarse gravel to cobbles, but minimal recent growth of bar evident by lack of vegetation on portions of the bar. For S > 0.02 and w/y <12, no bars are evident	For S < 0.02 and w/y > 12, bar widths tend to be wide and composed of newly deposited coarse sand to small cobbles and/or may be sparsely vegetated. Bars forming for S > 0.02 and w/y < 12	Bar widths are generally greater than 1/2 the stream width at low flow. Bars are composed of extensive deposits of fine particles up to coarse gravel with little to no vegetation. No bars for S < 0.02 and w/y > 12	10
7. Obstructions, including bedrock outcrops, armor layer, LED jams, grade control, bridge bed paving, revetments, dikes or vanes, riprap	Rare or not present	Occasional, causing cross currents and minor bank and bottom erosion	Moderately frequent and occasionally unstable obstructions, cause noticeable erosion of the channel. Considerable sediment accumulation behind obstructions	Frequent and often unstable, causing a continual shift of sediment and flow. Traps are easily filled, causing channel to migrate and/or widen	6

Norkett Reach 2

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
8. Bank soil texture and coherence	Clay and silty clay; cohesive material	Clay loam to sandy clay loam; minor amounts of noncohesive or unconsolidated mixtures; layers may exist, but are cohesive materials	Sandy clay to sandy loam; unconsolidated mixtures of glacial or other materials; small layers and lenses of noncohesive or unconsolidated mixtures	Loamy sand to sand; noncohesive material; unconsolidated mixtures of glacial or other materials; layers of lenses that include noncohesive sands and gravels	5
9. Average bank slope angle (where 90° is a vertical bank)	Bank slopes < 3H:1V (18°) for noncohesive or unconsolidated materials to < 1:1 (45°) in clays on both sides	Bank slopes up to 2H:1V (27°) in noncohesive or unconsolidated materials to 0.8:1 (50°) in clays on one or occasionally both banks	Bank slopes to 1H:1V (45°) in noncohesive or unconsolidated materials to 0.6:1 (60°) in clays common on one or both banks	Bank slopes over 45° in noncohesive or unconsolidated materials or over 60° in clays common on one or both banks	9
10. Vegetative or engineered bank protection	Wide band of woody vegetation with at least 90% density and cover. Primarily hard wood, leafy, deciduous trees with mature, healthy, and diverse vegetation located on the bank. Woody vegetation oriented vertically. In absence of vegetation, both banks are lined or heavily armored	Medium band of woody vegetation with 70-90% plant density and cover. A majority of hard wood, leafy, deciduous trees with maturing, diverse vegetation located on the bank. Wood vegetation oriented 80-90% from horizontal with minimal root exposure. Partial lining or armoring of one or both banks	Small band of woody vegetation with 50-70% plant density and cover. A majority of soft wood, piney, coniferous trees with young or old vegetation lacking in diversity located on or near the top of bank. Woody vegetation oriented at 70-80% from horizontal, often with evident root exposure. No lining of banks, but some armoring may be in place on one bank	Woody vegetation band may vary depending on age and health with less than 50% plant density and cover. Primarily soft wood, piney, coniferous trees with very young, old and dying, and/or monostand vegetation located off of the bank. Woody vegetation oriented at less than 70% from horizontal with extensive root exposure. No lining or armoring of banks	11
11. Bank cutting	Little or none evident. Infrequent raw banks, insignificant percentage of total bank	Some intermittently along channel bends and at prominent constrictions. Raw banks comprise minor portion of bank in vertical direction	Significant and frequent on both banks. Raw banks comprise large portion of bank in vertical direction. Root mat overhangs	Almost continuous cuts on both banks, some extending over most of the banks. Undercutting and sod-root overhangs	7
12. Mass wasting or bank failure	No or little evidence of potential or very small amounts of mass wasting. Uniform channel width over the entire reach	Evidence of infrequent and/or minor mass wasting. Mostly healed over with vegetation. Relatively constant channel width and minimal scalloping of banks	Evidence of frequent and/or significant occurrences of mass wasting that can be aggravated by higher flows, which may cause undercutting and mass wasting of unstable banks. Channel width quite irregular, and scalloping of banks is evident	Frequent and extensive mass wasting. The potential for bank failure, as evidenced by tension cracks, massive undercuttings, and bank slumping is considerable. Channel width is highly irregular, and banks are scalloped	7
13. Upstream distance to bridge from meander impact point and alignment	More than 35 m; bridge is well-aligned with river flow	20-35 m; bridge is aligned with flow	10-20 m; bridge is skewed to flow, or flow alignment is otherwise not centered beneath bridge	Less than 10 m; bridge is poorly aligned with flow	

H = horizontal, V = vertical, Fs = fraction of sand, S = slope, w/y = width-to-depth ratio

Total Score 93

Stream: UT1 to Norkett Branch
Reach:
Date: 8/16/12
Weather:
Location:

Observers: IE/NM
Project:
Drainage Area:
Stream Type

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
1. Watershed and flood plain activity and characteristics	Stable, forested, undisturbed watershed	Occasional minor disturbances in the watershed, including cattle activity (grazing and/or access to stream), construction, logging, or other minor deforestation. Limited agricultural activities	Frequent disturbances in the watershed, including cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Urbanization over significant portion of watershed	Continual disturbances in the watershed. Significant cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Highly urbanized or rapidly urbanizing watershed	10
2. Flow habit	Perennial stream with no flashy behavior	Perennial stream or ephemeral first-order stream with slightly increased rate of flooding	Perennial or intermittent stream with flashy behavior	Extremely flashy; flash floods prevalent mode of discharge; ephemeral stream other than first-order stream	3
3. Channel pattern	No evidence of channelization, Meandering, stable channel or straight (step-pool system, narrow valley), stable channel.	Appears to have previously been channelized. Stream is relatively stable. Channel has some meanders due to previous channel adjustment.	Appears to have previously been channelized. Stream is actively adjusting (meandering); localized areas of instability and/or erosion around bends. Straightened, stable channel.	Appears to have previously been channelized. Stream is actively adjusting (laterally and/or vertically) with few bends. Straight, unstable reach.	9
4. Entrenchment/ channel confinement	Active flood plain exists at top of banks; no sign of undercutting infrastructure; no levees	Active flood plain abandoned, but is currently rebuilding; minimal channel confinement; infrastructure not exposed; levees are low and set well back from the river	Moderate confinement in valley or channel walls; some exposure of infrastructure; terraces exist; flood plain abandoned; levees are moderate in size and have minimal setback from the river	Knickpoints visible downstream; exposed water lines or other infrastructure; channel-width-to-top-of-banks ration small; deeply confined; no active flood plain; levees are high and along the channel edge	8
5. Bed material Fs = approximate portion of sand in the bed	Assorted sized tightly packed, overlapping, and possibly imbricated. Most material > 4 mm. Fs < 20%	Moderately packed with some overlapping. Very small amounts of material < 4 mm. 20 < Fs < 50%	Loose assortment with no apparent overlap. Small to medium amounts of material < 4 mm. 50 < Fs < 70%	Very loose assortment with no packing. Large amounts of material < 4 mm. Fs > 70%	10
6. Bar development	For S < 0.02 and w/y > 12, bars are mature, narrow relative to stream width at low flow, well-vegetated, and composed of coarse gravel to cobbles. For S > 0.02 and w/y are < 12, no bars are evident	For S < 0.02 and w/y > 12, bars may have vegetation and/or be composed of coarse gravel to cobbles, but minimal recent growth of bar evident by lack of vegetation on portions of the bar. For S > 0.02 and w/y <12, no bars are evident	For S < 0.02 and w/y > 12, bar widths tend to be wide and composed of newly deposited coarse sand to small cobbles and/or may be sparsely vegetated. Bars forming for S > 0.02 and w/y < 12	Bar widths are generally greater than 1/2 the stream width at low flow. Bars are composed of extensive deposits of fine particles up to coarse gravel with little to no vegetation. No bars for S < 0.02 and w/y > 12	1
7. Obstructions, including bedrock outcrops, armor layer, LED jams, grade control, bridge bed paving, revetments, dikes or vanes, riprap	Rare or not present	Occasional, causing cross currents and minor bank and bottom erosion	Moderately frequent and occasionally unstable obstructions, cause noticeable erosion of the channel. Considerable sediment accumulation behind obstructions	Frequent and often unstable, causing a continual shift of sediment and flow. Traps are easily filled, causing channel to migrate and/or widen	2

UT1 to Norkett Branch

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
8. Bank soil texture and coherence	Clay and silty clay; cohesive material	Clay loam to sandy clay loam; minor amounts of noncohesive or unconsolidated mixtures; layers may exist, but are cohesive materials	Sandy clay to sandy loam; unconsolidated mixtures of glacial or other materials; small layers and lenses of noncohesive or unconsolidated mixtures	Loamy sand to sand; noncohesive material; unconsolidated mixtures of glacial or other materials; layers of lenses that include noncohesive sands and gravels	5
9. Average bank slope angle (where 90° is a vertical bank)	Bank slopes < 3H:1V (18°) for noncohesive or unconsolidated materials to < 1:1 (45°) in clays on both sides	Bank slopes up to 2H:1V (27°) in noncohesive or unconsolidated materials to 0.8:1 (50°) in clays on one or occasionally both banks	Bank slopes to 1H:1V (45°) in noncohesive or unconsolidated materials to 0.6:1 (60°) in clays common on one or both banks	Bank slopes over 45° in noncohesive or unconsolidated materials or over 60° in clays common on one or both banks	7
10. Vegetative or engineered bank protection	Wide band of woody vegetation with at least 90% density and cover. Primarily hard wood, leafy, deciduous trees with mature, healthy, and diverse vegetation located on the bank. Woody vegetation oriented vertically. In absence of vegetation, both banks are lined or heavily armored	Medium band of woody vegetation with 70-90% plant density and cover. A majority of hard wood, leafy, deciduous trees with maturing, diverse vegetation located on the bank. Wood vegetation oriented 80-90% from horizontal with minimal root exposure. Partial lining or armoring of one or both banks	Small band of woody vegetation with 50-70% plant density and cover. A majority of soft wood, piney, coniferous trees with young or old vegetation lacking in diversity located on or near the top of bank. Woody vegetation oriented at 70-80% from horizontal, often with evident root exposure. No lining of banks, but some armoring may be in place on one bank	Woody vegetation band may vary depending on age and health with less than 50% plant density and cover. Primarily soft wood, piney, coniferous trees with very young, old and dying, and/or monostand vegetation located off of the bank. Woody vegetation oriented at less than 70% from horizontal with extensive root exposure. No lining or armoring of banks	7
11. Bank cutting	Little or none evident. Infrequent raw banks, insignificant percentage of total bank	Some intermittently along channel bends and at prominent constrictions. Raw banks comprise minor portion of bank in vertical direction	Significant and frequent on both banks. Raw banks comprise large portion of bank in vertical direction. Root mat overhangs	Almost continuous cuts on both banks, some extending over most of the banks. Undercutting and sod-root overhangs	4
12. Mass wasting or bank failure	No or little evidence of potential or very small amounts of mass wasting. Uniform channel width over the entire reach	Evidence of infrequent and/or minor mass wasting. Mostly healed over with vegetation. Relatively constant channel width and minimal scalloping of banks	Evidence of frequent and/or significant occurrences of mass wasting that can be aggravated by higher flows, which may cause undercutting and mass wasting of unstable banks. Channel width quite irregular, and scalloping of banks is evident	Frequent and extensive mass wasting. The potential for bank failure, as evidenced by tension cracks, massive undercuttings, and bank slumping is considerable. Channel width is highly irregular, and banks are scalloped	6
13. Upstream distance to bridge from meander impact point and alignment	More than 35 m; bridge is well-aligned with river flow	20-35 m; bridge is aligned with flow	10-20 m; bridge is skewed to flow, or flow alignment is otherwise not centered beneath bridge	Less than 10 m; bridge is poorly aligned with flow	

H = horizontal, V = vertical, Fs = fraction of sand, S = slope, w/y = width-to-depth ratio

Total Score 72

Stream: UT2 to Norkett Branch
Reach: Reach 1
Date: 9/10/12
Weather:
Location:

Observers: IE
Project:
Drainage Area:
Stream Type

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
1. Watershed and flood plain activity and characteristics	Stable, forested, undisturbed watershed	Occasional minor disturbances in the watershed, including cattle activity (grazing and/or access to stream), construction, logging, or other minor deforestation. Limited agricultural activities	Frequent disturbances in the watershed, including cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Urbanization over significant portion of watershed	Continual disturbances in the watershed. Significant cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Highly urbanized or rapidly urbanizing watershed	10
2. Flow habit	Perennial stream with no flashy behavior	Perennial stream or ephemeral first-order stream with slightly increased rate of flooding	Perennial or intermittent stream with flashy behavior	Extremely flashy; flash floods prevalent mode of discharge; ephemeral stream other than first-order stream	3
3. Channel pattern	No evidence of channelization. Meandering, stable channel or straight (step-pool system, narrow valley), stable channel.	Appears to have previously been channelized. Stream is relatively stable. Channel has some meanders due to previous channel adjustment.	Appears to have previously been channelized. Stream is actively adjusting (meandering); localized areas of instability and/or erosion around bends. Straightened, stable channel.	Appears to have previously been channelized. Stream is actively adjusting (laterally and/or vertically) with few bends. Straight, unstable reach.	9
4. Entrenchment/ channel confinement	Active flood plain exists at top of banks; no sign of undercutting infrastructure; no levees	Active flood plain abandoned, but is currently rebuilding; minimal channel confinement; infrastructure not exposed; levees are low and set well back from the river	Moderate confinement in valley or channel walls; some exposure of infrastructure; terraces exist; flood plain abandoned; levees are moderate in size and have minimal setback from the river	Knickpoints visible downstream; exposed water lines or other infrastructure; channel-width-to-top-of-banks ration small; deeply confined; no active flood plain; levees are high and along the channel edge	3
5. Bed material Fs = approximate portion of sand in the bed	Assorted sized tightly packed, overlapping, and possibly imbricated. Most material > 4 mm. Fs < 20%	Moderately packed with some overlapping. Very small amounts of material < 4 mm. 20 < Fs < 50%	Loose assortment with no apparent overlap. Small to medium amounts of material < 4 mm. 50 < Fs < 70%	Very loose assortment with no packing. Large amounts of material < 4 mm. Fs > 70%	8
6. Bar development	For S < 0.02 and w/y > 12. bars are mature, narrow relative to stream width at low flow, well-vegetated, and composed of coarse gravel to cobbles. For S > 0.02 and w/y are < 12, no bars are evident	For S < 0.02 and w/y > 12. bars may have vegetation and/or be composed of coarse gravel to cobbles, but minimal recent growth of bar evident by lack of vegetation on portions of the bar. For S > 0.02 and w/y <12, no bars are evident	For S < 0.02 and w/y > 12, bar widths tend to be wide and composed of newly deposited coarse sand to small cobbles and/or may be sparsely vegetated. Bars forming for S > 0.02 and w/y < 12	Bar widths are generally greater than 1/2 the stream width at low flow. Bars are composed of extensive deposits of fine particles up to coarse gravel with little to no vegetation. No bars for S < 0.02 and w/y > 12	1
7. Obstructions, including bedrock outcrops, armor layer, LED jams, grade control, bridge bed paving, revetments, dikes or vanes, riprap	Rare or not present	Occasional, causing cross currents and minor bank and bottom erosion	Moderately frequent and occasionally unstable obstructions, cause noticeable erosion of the channel. Considerable sediment accumulation behind obstructions	Frequent and often unstable, causing a continual shift of sediment and flow. Traps are easily filled, causing channel to migrate and/or widen	1

UT2 to Norkett Branch
Reach 1

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
8. Bank soil texture and coherence	Clay and silty clay; cohesive material	Clay loam to sandy clay loam; minor amounts of noncohesive or unconsolidated mixtures; layers may exist, but are cohesive materials	Sandy clay to sandy loam; unconsolidated mixtures of glacial or other materials; small layers and lenses of noncohesive or unconsolidated mixtures	Loamy sand to sand; noncohesive material; unconsolidated mixtures of glacial or other materials; layers of lenses that include noncohesive sands and gravels	5
9. Average bank slope angle (where 90° is a vertical bank)	Bank slopes < 3H:1V (18°) for noncohesive or unconsolidated materials to < 1:1 (45°) in clays on both sides	Bank slopes up to 2H:1V (27°) in noncohesive or unconsolidated materials to 0.8:1 (50°) in clays on one or occasionally both banks	Bank slopes to 1H:1V (45°) in noncohesive or unconsolidated materials to 0.6:1 (60°) in clays common on one or both banks	Bank slopes over 45° in noncohesive or unconsolidated materials or over 60° in clays common on one or both banks	2
10. Vegetative or engineered bank protection	Wide band of woody vegetation with at least 90% density and cover. Primarily hard wood, leafy, deciduous trees with mature, healthy, and diverse vegetation located on the bank. Woody vegetation oriented vertically. In absence of vegetation, both banks are lined or heavily armored	Medium band of woody vegetation with 70-90% plant density and cover. A majority of hard wood, leafy, deciduous trees with maturing, diverse vegetation located on the bank. Wood vegetation oriented 80-90% from horizontal with minimal root exposure. Partial lining or armoring of one or both banks	Small band of woody vegetation with 50-70% plant density and cover. A majority of soft wood, piney, coniferous trees with young or old vegetation lacking in diversity located on or near the top of bank. Woody vegetation oriented at 70-80% from horizontal, often with evident root exposure. No lining of banks, but some armoring may be in place on one bank	Woody vegetation band may vary depending on age and health with less than 50% plant density and cover. Primarily soft wood, piney, coniferous trees with very young, old and dying, and/or monostand vegetation located off of the bank. Woody vegetation oriented at less than 70% from horizontal with extensive root exposure. No lining or armoring of banks	12
11. Bank cutting	Little or none evident. Infrequent raw banks, insignificant percentage of total bank	Some intermittently along channel bends and at prominent constrictions. Raw banks comprise minor portion of bank in vertical direction	Significant and frequent on both banks. Raw banks comprise large portion of bank in vertical direction. Root mat overhangs	Almost continuous cuts on both banks, some extending over most of the banks. Undercutting and sod-root overhangs	1
12. Mass wasting or bank failure	No or little evidence of potential or very small amounts of mass wasting. Uniform channel width over the entire reach	Evidence of infrequent and/or minor mass wasting. Mostly healed over with vegetation. Relatively constant channel width and minimal scalloping of banks	Evidence of frequent and/or significant occurrences of mass wasting that can be aggravated by higher flows, which may cause undercutting and mass wasting of unstable banks. Channel width quite irregular, and scalloping of banks is evident	Frequent and extensive mass wasting. The potential for bank failure, as evidenced by tension cracks, massive undercuttings, and bank slumping is considerable. Channel width is highly irregular, and banks are scalloped	1
13. Upstream distance to bridge from meander impact point and alignment	More than 35 m; bridge is well-aligned with river flow	20-35 m; bridge is aligned with flow	10-20 m; bridge is skewed to flow, or flow alignment is otherwise not centered beneath bridge	Less than 10 m; bridge is poorly aligned with flow	

H = horizontal, V = vertical, Fs = fraction of sand, S = slope, w/y = width-to-depth ratio

Total Score 56

Stream: UT2 to Norkett Branch
Reach: Reach 2
Date: 9/10/12
Weather:
Location:

Observers: IE
Project:
Drainage Area:
Stream Type

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
1. Watershed and flood plain activity and characteristics	Stable, forested, undisturbed watershed	Occasional minor disturbances in the watershed, including cattle activity (grazing and/or access to stream), construction, logging, or other minor deforestation. Limited agricultural activities	Frequent disturbances in the watershed, including cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Urbanization over significant portion of watershed	Continual disturbances in the watershed. Significant cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Highly urbanized or rapidly urbanizing watershed	10
2. Flow habit	Perennial stream with no flashy behavior	Perennial stream or ephemeral first-order stream with slightly increased rate of flooding	Perennial or intermittent stream with flashy behavior	Extremely flashy; flash floods prevalent mode of discharge; ephemeral stream other than first-order stream	3
3. Channel pattern	No evidence of channelization. Meandering, stable channel or straight (step-pool system, narrow valley), stable channel.	Appears to have previously been channelized. Stream is relatively stable. Channel has some meanders due to previous channel adjustment.	Appears to have previously been channelized. Stream is actively adjusting (meandering); localized areas of instability and/or erosion around bends. Straightened, stable channel.	Appears to have previously been channelized. Stream is actively adjusting (laterally and/or vertically) with few bends. Straight, unstable reach.	9
4. Entrenchment/ channel confinement	Active flood plain exists at top of banks; no sign of undercutting infrastructure; no levees	Active flood plain abandoned, but is currently rebuilding; minimal channel confinement; infrastructure not exposed; levees are low and set well back from the river	Moderate confinement in valley or channel walls; some exposure of infrastructure; terraces exist; flood plain abandoned; levees are moderate in size and have minimal setback from the river	Knickpoints visible downstream; exposed water lines or other infrastructure; channel-width-to-top-of-banks ration small; deeply confined; no active flood plain; levees are high and along the channel edge	6
5. Bed material Fs = approximate portion of sand in the bed	Assorted sized tightly packed, overlapping, and possibly imbricated. Most material > 4 mm. Fs < 20%	Moderately packed with some overlapping. Very small amounts of material < 4 mm. 20 < Fs < 50%	Loose assortment with no apparent overlap. Small to medium amounts of material < 4 mm. 50 < Fs < 70%	Very loose assortment with no packing. Large amounts of material < 4 mm. Fs > 70%	8
6. Bar development	For S < 0.02 and w/y > 12. bars are mature, narrow relative to stream width at low flow, well-vegetated, and composed of coarse gravel to cobbles. For S > 0.02 and w/y are < 12, no bars are evident	For S < 0.02 and w/y > 12. bars may have vegetation and/or be composed of coarse gravel to cobbles, but minimal recent growth of bar evident by lack of vegetation on portions of the bar. For S > 0.02 and w/y <12, no bars are evident	For S < 0.02 and w/y > 12, bar widths tend to be wide and composed of newly deposited coarse sand to small cobbles and/or may be sparsely vegetated. Bars forming for S > 0.02 and w/y < 12	Bar widths are generally greater than 1/2 the stream width at low flow. Bars are composed of extensive deposits of fine particles up to coarse gravel with little to no vegetation. No bars for S < 0.02 and w/y > 12	1
7. Obstructions, including bedrock outcrops, armor layer, LED jams, grade control, bridge bed paving, revetments, dikes or vanes, riprap	Rare or not present	Occasional, causing cross currents and minor bank and bottom erosion	Moderately frequent and occasionally unstable obstructions, cause noticeable erosion of the channel. Considerable sediment accumulation behind obstructions	Frequent and often unstable, causing a continual shift of sediment and flow. Traps are easily filled, causing channel to migrate and/or widen	4

UT2 to Norkett Branch
Reach 2

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
8. Bank soil texture and coherence	Clay and silty clay; cohesive material	Clay loam to sandy clay loam; minor amounts of noncohesive or unconsolidated mixtures; layers may exist, but are cohesive materials	Sandy clay to sandy loam; unconsolidated mixtures of glacial or other materials; small layers and lenses of noncohesive or unconsolidated mixtures	Loamy sand to sand; noncohesive material; unconsolidated mixtures of glacial or other materials; layers of lenses that include noncohesive sands and gravels	5
9. Average bank slope angle (where 90° is a vertical bank)	Bank slopes < 3H:1V (18°) for noncohesive or unconsolidated materials to < 1:1 (45°) in clays on both sides	Bank slopes up to 2H:1V (27°) in noncohesive or unconsolidated materials to 0.8:1 (50°) in clays on one or occasionally both banks	Bank slopes to 1H:1V (45°) in noncohesive or unconsolidated materials to 0.6:1 (60°) in clays common on one or both banks	Bank slopes over 45° in noncohesive or unconsolidated materials or over 60° in clays common on one or both banks	9
10. Vegetative or engineered bank protection	Wide band of woody vegetation with at least 90% density and cover. Primarily hard wood, leafy, deciduous trees with mature, healthy, and diverse vegetation located on the bank. Woody vegetation oriented vertically. In absence of vegetation, both banks are lined or heavily armored	Medium band of woody vegetation with 70-90% plant density and cover. A majority of hard wood, leafy, deciduous trees with maturing, diverse vegetation located on the bank. Wood vegetation oriented 80-90% from horizontal with minimal root exposure. Partial lining or armoring of one or both banks	Small band of woody vegetation with 50-70% plant density and cover. A majority of soft wood, piney, coniferous trees with young or old vegetation lacking in diversity located on or near the top of bank. Woody vegetation oriented at 70-80% from horizontal, often with evident root exposure. No lining of banks, but some armoring may be in place on one bank	Woody vegetation band may vary depending on age and health with less than 50% plant density and cover. Primarily soft wood, piney, coniferous trees with very young, old and dying, and/or monostand vegetation located off of the bank. Woody vegetation oriented at less than 70% from horizontal with extensive root exposure. No lining or armoring of banks	10
11. Bank cutting	Little or none evident. Infrequent raw banks, insignificant percentage of total bank	Some intermittently along channel bends and at prominent constrictions. Raw banks comprise minor portion of bank in vertical direction	Significant and frequent on both banks. Raw banks comprise large portion of bank in vertical direction. Root mat overhangs	Almost continuous cuts on both banks, some extending over most of the banks. Undercutting and sod-root overhangs	6
12. Mass wasting or bank failure	No or little evidence of potential or very small amounts of mass wasting. Uniform channel width over the entire reach	Evidence of infrequent and/or minor mass wasting. Mostly healed over with vegetation. Relatively constant channel width and minimal scalloping of banks	Evidence of frequent and/or significant occurrences of mass wasting that can be aggravated by higher flows, which may cause undercutting and mass wasting of unstable banks. Channel width quite irregular, and scalloping of banks is evident	Frequent and extensive mass wasting. The potential for bank failure, as evidenced by tension cracks, massive undercuttings, and bank slumping is considerable. Channel width is highly irregular, and banks are scalloped	6
13. Upstream distance to bridge from meander impact point and alignment	More than 35 m; bridge is well aligned with river flow	20-35 m; bridge is aligned with flow	10-20 m; bridge is skewed to flow, or flow alignment is otherwise not centered beneath bridge	Less than 10 m; bridge is poorly aligned with flow	

H = horizontal, V = vertical, Fs = fraction of sand, S = slope, w/y = width-to-depth ratio

Total Score 77

Stream: UT2 to Norkett Branch
Reach: Reach 3
Date: 9/10/12
Weather:
Location:

Observers: IE
Project:
Drainage Area:
Stream Type

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
1. Watershed and flood plain activity and characteristics	Stable, forested, undisturbed watershed	Occasional minor disturbances in the watershed, including cattle activity (grazing and/or access to stream), construction, logging, or other minor deforestation. Limited agricultural activities	Frequent disturbances in the watershed, including cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Urbanization over significant portion of watershed	Continual disturbances in the watershed. Significant cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Highly urbanized or rapidly urbanizing watershed	10
2. Flow habit	Perennial stream with no flashy behavior	Perennial stream or ephemeral first-order stream with slightly increased rate of flooding	Perennial or intermittent stream with flashy behavior	Extremely flashy; flash floods prevalent mode of discharge; ephemeral stream other than first-order stream	3
3. Channel pattern	No evidence of channelization. Meandering, stable channel or straight (step-pool system, narrow valley), stable channel.	Appears to have previously been channelized. Stream is relatively stable. Channel has some meanders due to previous channel adjustment.	Appears to have previously been channelized. Stream is actively adjusting (meandering); localized areas of instability and/or erosion around bends. Straightened, stable channel.	Appears to have previously been channelized. Stream is actively adjusting (laterally and/or vertically) with few bends. Straight, unstable reach.	10
4. Entrenchment/ channel confinement	Active flood plain exists at top of banks; no sign of undercutting infrastructure; no levees	Active flood plain abandoned, but is currently rebuilding; minimal channel confinement; infrastructure not exposed; levees are low and set well back from the river	Moderate confinement in valley or channel walls; some exposure of infrastructure; terraces exist; flood plain abandoned; levees are moderate in size and have minimal setback from the river	Knickpoints visible downstream; exposed water lines or other infrastructure; channel-width-to-top-of-banks ration small; deeply confined; no active flood plain; levees are high and along the channel edge	7
5. Bed material Fs = approximate portion of sand in the bed	Assorted sized tightly packed, overlapping, and possibly imbricated. Most material > 4 mm. Fs < 20%	Moderately packed with some overlapping. Very small amounts of material < 4 mm. 20 < Fs < 50%	Loose assortment with no apparent overlap. Small to medium amounts of material < 4 mm. 50 < Fs < 70%	Very loose assortment with no packing. Large amounts of material < 4 mm. Fs > 70%	8
6. Bar development	For S < 0.02 and w/y > 12, bars are mature, narrow relative to stream width at low flow, well-vegetated, and composed of coarse gravel to cobbles. For S > 0.02 and w/y are < 12, no bars are evident	For S < 0.02 and w/y > 12, bars may have vegetation and/or be composed of coarse gravel to cobbles, but minimal recent growth of bar evident by lack of vegetation on portions of the bar. For S > 0.02 and w/y <12, no bars are evident	For S < 0.02 and w/y > 12, bar widths tend to be wide and composed of newly deposited coarse sand to small cobbles and/or may be sparsely vegetated. Bars forming for S > 0.02 and w/y < 12	Bar widths are generally greater than 1/2 the stream width at low flow. Bars are composed of extensive deposits of fine particles up to coarse gravel with little to no vegetation. No bars for S < 0.02 and w/y > 12	1
7. Obstructions, including bedrock outcrops, armor layer, LED jams, grade control, bridge bed paving, revetments, dikes or vanes, riprap	Rare or not present	Occasional, causing cross currents and minor bank and bottom erosion	Moderately frequent and occasionally unstable obstructions, cause noticeable erosion of the channel. Considerable sediment accumulation behind obstructions	Frequent and often unstable, causing a continual shift of sediment and flow. Traps are easily filled, causing channel to migrate and/or widen	1

UT2 to Norkett Branch
Reach 3

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
8. Bank soil texture and coherence	Clay and silty clay; cohesive material	Clay loam to sandy clay loam; minor amounts of noncohesive or unconsolidated mixtures; layers may exist, but are cohesive materials	Sandy clay to sandy loam; unconsolidated mixtures of glacial or other materials; small layers and lenses of noncohesive or unconsolidated mixtures	Loamy sand to sand; noncohesive material; unconsolidated mixtures of glacial or other materials; layers of lenses that include noncohesive sands and gravels	5
9. Average bank slope angle (where 90° is a vertical bank)	Bank slopes < 3H:1V (18°) for noncohesive or unconsolidated materials to < 1:1 (45°) in clays on both sides	Bank slopes up to 2H:1V (27°) in noncohesive or unconsolidated materials to 0.8:1 (50°) in clays on one or occasionally both banks	Bank slopes to 1H:1V (45°) in noncohesive or unconsolidated materials to 0.6:1 (60°) in clays common on one or both banks	Bank slopes over 45° in noncohesive or unconsolidated materials or over 60° in clays common on one or both banks	7
10. Vegetative or engineered bank protection	Wide band of woody vegetation with at least 90% density and cover. Primarily hard wood, leafy, deciduous trees with mature, healthy, and diverse vegetation located on the bank. Woody vegetation oriented vertically. In absence of vegetation, both banks are lined or heavily armored	Medium band of woody vegetation with 70-90% plant density and cover. A majority of hard wood, leafy, deciduous trees with maturing, diverse vegetation located on the bank. Wood vegetation oriented 80-90% from horizontal with minimal root exposure. Partial lining or armoring of one or both banks	Small band of woody vegetation with 50-70% plant density and cover. A majority of soft wood, piney, coniferous trees with young or old vegetation lacking in diversity located on or near the top of bank. Woody vegetation oriented at 70-80% from horizontal, often with evident root exposure. No lining of banks, but some armoring may be in place on one bank	Woody vegetation band may vary depending on age and health with less than 50% plant density and cover. Primarily soft wood, piney, coniferous trees with very young, old and dying, and/or monostand vegetation located off of the bank. Woody vegetation oriented at less than 70% from horizontal with extensive root exposure. No lining or armoring of banks	8
11. Bank cutting	Little or none evident. Infrequent raw banks, insignificant percentage of total bank	Some intermittently along channel bends and at prominent constrictions. Raw banks comprise minor portion of bank in vertical direction	Significant and frequent on both banks. Raw banks comprise large portion of bank in vertical direction. Root mat overhangs	Almost continuous cuts on both banks, some extending over most of the banks. Undercutting and sod-root overhangs	7
12. Mass wasting or bank failure	No or little evidence of potential or very small amounts of mass wasting. Uniform channel width over the entire reach	Evidence of infrequent and/or minor mass wasting. Mostly healed over with vegetation. Relatively constant channel width and minimal scalloping of banks	Evidence of frequent and/or significant occurrences of mass wasting that can be aggravated by higher flows, which may cause undercutting and mass wasting of unstable banks. Channel width quite irregular, and scalloping of banks is evident	Frequent and extensive mass wasting. The potential for bank failure, as evidenced by tension cracks, massive undercuttings, and bank slumping is considerable. Channel width is highly irregular, and banks are scalloped	6
13. Upstream distance to bridge from meander impact point and alignment	More than 35 m; bridge is well-aligned with river flow	20-35 m; bridge is aligned with flow	10-20 m; bridge is skewed to flow, or flow alignment is otherwise not centered beneath bridge	Less than 10 m; bridge is poorly aligned with flow	

H = horizontal, V = vertical, Fs = fraction of sand, S = slope, w/y = width-to-depth ratio

Total Score 73

Stream: UT2 A to Norkett Branch
Reach:
Date: 9/10/12
Weather:
Location:

Observers: IE
Project:
Drainage Area:
Stream Type

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
1. Watershed and flood plain activity and characteristics	Stable, forested, undisturbed watershed	Occasional minor disturbances in the watershed, including cattle activity (grazing and/or access to stream), construction, logging, or other minor deforestation. Limited agricultural activities	Frequent disturbances in the watershed, including cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Urbanization over significant portion of watershed	Continual disturbances in the watershed. Significant cattle activity, landslides, channel sand or gravel mining, logging, farming, or construction of buildings, roads, or other infrastructure. Highly urbanized or rapidly urbanizing watershed	10
2. Flow habit	Perennial stream with no flashy behavior	Perennial stream or ephemeral first-order stream with slightly increased rate of flooding	Perennial or intermittent stream with flashy behavior	Extremely flashy; flash floods prevalent mode of discharge; ephemeral stream other than first-order stream	3
3. Channel pattern	No evidence of channelization. Meandering, stable channel or straight (step-pool system, narrow valley), stable channel.	Appears to have previously been channelized. Stream is relatively stable. Channel has some meanders due to previous channel adjustment.	Appears to have previously been channelized. Stream is actively adjusting (meandering); localized areas of instability and/or erosion around bends. Straightened, stable channel.	Appears to have previously been channelized. Stream is actively adjusting (laterally and/or vertically) with few bends. Straight, unstable reach.	11
4. Entrenchment/ channel confinement	Active flood plain exists at top of banks; no sign of undercutting infrastructure; no levees	Active flood plain abandoned, but is currently rebuilding; minimal channel confinement; infrastructure not exposed; levees are low and set well back from the river	Moderate confinement in valley or channel walls; some exposure of infrastructure; terraces exist; flood plain abandoned; levees are moderate in size and have minimal setback from the river	Knickpoints visible downstream; exposed water lines or other infrastructure; channel-width-to-top-of-banks ration small; deeply confined; no active flood plain; levees are high and along the channel edge	7
5. Bed material Fs = approximate portion of sand in the bed	Assorted sized tightly packed, overlapping, and possibly imbricated. Most material > 4 mm. Fs < 20%	Moderately packed with some overlapping. Very small amounts of material < 4 mm. 20 < Fs < 50%	Loose assortment with no apparent overlap. Small to medium amounts of material < 4 mm. 50 < Fs < 70%	Very loose assortment with no packing. Large amounts of material < 4 mm. Fs > 70%	8
6. Bar development	For S < 0.02 and w/y > 12. bars are mature, narrow relative to stream width at low flow, well-vegetated, and composed of coarse gravel to cobbles. For S > 0.02 and w/y are < 12, no bars are evident	For S < 0.02 and w/y > 12. bars may have vegetation and/or be composed of coarse gravel to cobbles, but minimal recent growth of bar evident by lack of vegetation on portions of the bar. For S > 0.02 and w/y <12, no bars are evident	For S < 0.02 and w/y > 12, bar widths tend to be wide and composed of newly deposited coarse sand to small cobbles and/or may be sparsely vegetated. Bars forming for S > 0.02 and w/y < 12	Bar widths are generally greater than 1/2 the stream width at low flow. Bars are composed of extensive deposits of fine particles up to coarse gravel with little to no vegetation. No bars for S < 0.02 and w/y > 12	1
7. Obstructions, including bedrock outcrops, armor layer, LED jams, grade control, bridge bed paving, revetments, dikes or vanes, riprap	Rare or not present	Occasional, causing cross currents and minor bank and bottom erosion	Moderately frequent and occasionally unstable obstructions, cause noticeable erosion of the channel. Considerable sediment accumulation behind obstructions	Frequent and often unstable, causing a continual shift of sediment and flow. Traps are easily filled, causing channel to migrate and/or widen	1

UT2A to Norkett Branch

Stability Indicator	Excellent (1 -3)	Good (4 - 6)	Fair (7 - 9)	Poor (10 - 12)	Score
8. Bank soil texture and coherence	Clay and silty clay; cohesive material	Clay loam to sandy clay loam; minor amounts of noncohesive or unconsolidated mixtures; layers may exist, but are cohesive materials	Sandy clay to sandy loam; unconsolidated mixtures of glacial or other materials; small layers and lenses of noncohesive or unconsolidated mixtures	Loamy sand to sand; noncohesive material; unconsolidated mixtures of glacial or other materials; layers of lenses that include noncohesive sands and gravels	5
9. Average bank slope angle (where 90° is a vertical bank)	Bank slopes < 3H:1V (18°) for noncohesive or unconsolidated materials to < 1:1 (45°) in clays on both sides	Bank slopes up to 2H:1V (27°) in noncohesive or unconsolidated materials to 0.8:1 (50°) in clays on one or occasionally both banks	Bank slopes to 1H:1V (45°) in noncohesive or unconsolidated materials to 0.6:1 (60°) in clays common on one or both banks	Bank slopes over 45° in noncohesive or unconsolidated materials or over 60° in clays common on one or both banks	10
10. Vegetative or engineered bank protection	Wide band of woody vegetation with at least 90% density and cover. Primarily hard wood, leafy, deciduous trees with mature, healthy, and diverse vegetation located on the bank. Woody vegetation oriented vertically. In absence of vegetation, both banks are lined or heavily armored	Medium band of woody vegetation with 70-90% plant density and cover. A majority of hard wood, leafy, deciduous trees with maturing, diverse vegetation located on the bank. Wood vegetation oriented 80-90% from horizontal with minimal root exposure. Partial lining or armoring of one or both banks	Small band of woody vegetation with 50-70% plant density and cover. A majority of soft wood, piney, coniferous trees with young or old vegetation lacking in diversity located on or near the top of bank. Woody vegetation oriented at 70-80% from horizontal, often with evident root exposure. No lining of banks, but some armoring may be in place on one bank	Woody vegetation band may vary depending on age and health with less than 50% plant density and cover. Primarily soft wood, piney, coniferous trees with very young, old and dying, and/or monostand vegetation located off of the bank. Woody vegetation oriented at less than 70% from horizontal with extensive root exposure. No lining or armoring of banks	12
11. Bank cutting	Little or none evident. Infrequent raw banks, insignificant percentage of total bank	Some intermittently along channel bends and at prominent constrictions. Raw banks comprise minor portion of bank in vertical direction	Significant and frequent on both banks. Raw banks comprise large portion of bank in vertical direction. Root mat overhangs	Almost continuous cuts on both banks, some extending over most of the banks. Undercutting and sod-root overhangs	8
12. Mass wasting or bank failure	No or little evidence of potential or very small amounts of mass wasting. Uniform channel width over the entire reach	Evidence of infrequent and/or minor mass wasting. Mostly healed over with vegetation. Relatively constant channel width and minimal scalloping of banks	Evidence of frequent and/or significant occurrences of mass wasting that can be aggravated by higher flows, which may cause undercutting and mass wasting of unstable banks. Channel width quite irregular, and scalloping of banks is evident	Frequent and extensive mass wasting. The potential for bank failure, as evidenced by tension cracks, massive undercuttings, and bank slumping is considerable. Channel width is highly irregular, and banks are scalloped	6
13. Upstream distance to bridge from meander impact point and alignment	More than 35 m; bridge is well-aligned with river flow	20-35 m; bridge is aligned with flow	10-20 m; bridge is skewed to flow, or flow alignment is otherwise not centered beneath bridge	Less than 10 m; bridge is poorly aligned with flow	

H = horizontal, V = vertical, Fs = fraction of sand, S = slope, w/y = width-to-depth ratio

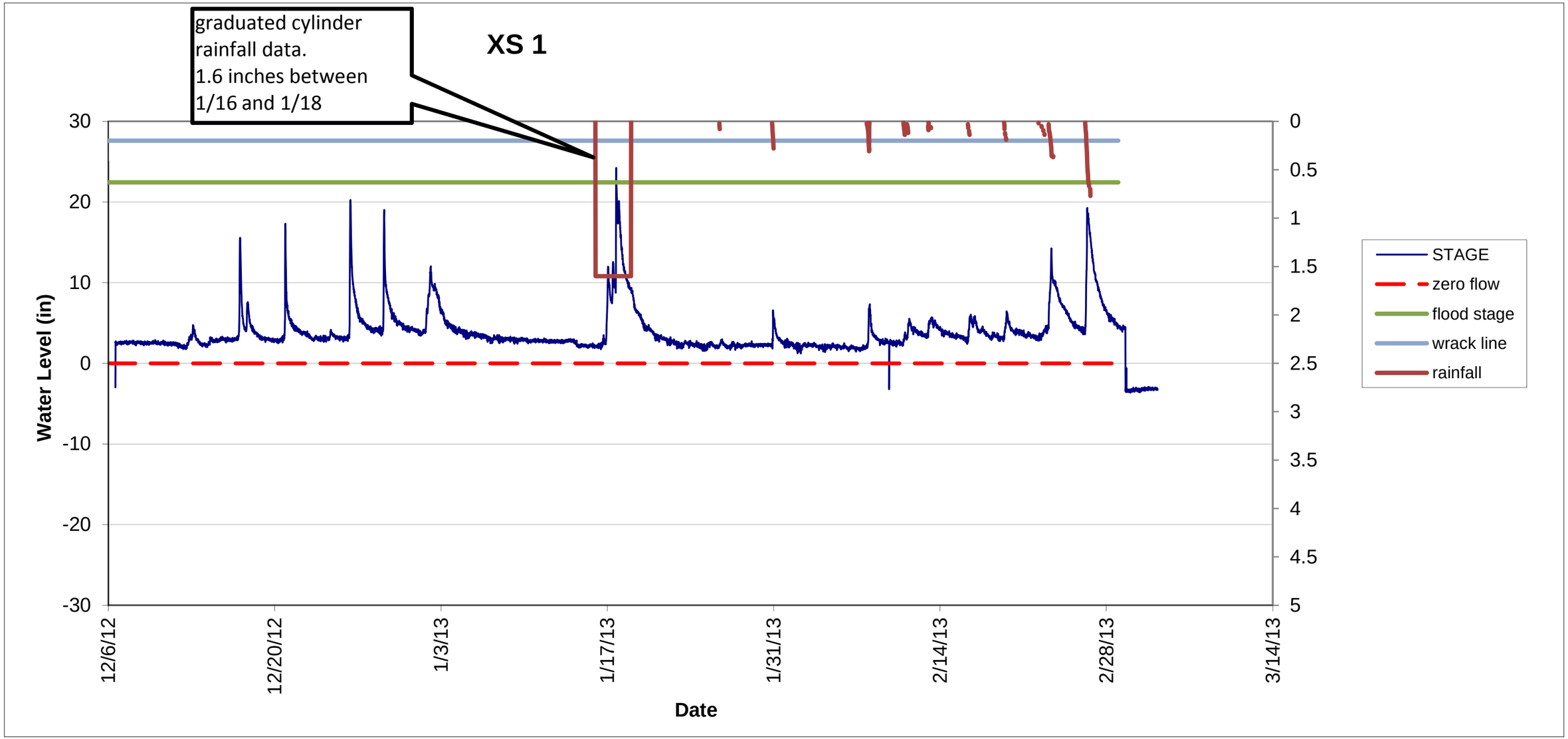
Total Score 82

WILDLANDS ENGINEERING

0 300 600 Feet

N

Stream Gage Figure
Norkett Branch
Stream Mitigation Site
Yadkin River Basin (03040105)
Union County, NC


graduated cylinder
rainfall data.
1.6 inches between
1/16 and 1/18
XS 1
Water Level (in)
30
20
10
0
-10
-20
-30
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
12/6/12
12/20/12
1/3/13
1/17/13
1/31/13
2/14/13
2/28/13
3/14/13
Date
STAGE
zero flow
flood stage
wrack line
rainfall

MONITORING GAUGE DATA SHEET:
Gauge #1

NOTES:

	2012
Begin Date for Calculations:	12/6/2012
End Date for Calculations:	7/6/2013
Water Table Criteria (depth in inches):	-12.0
Minimum Number of Days to Satisfy Criteria:	35
Min. Percent of Growing Season to Satisfy Criteria:	12.5%

Most Consecutive Days Meeting Criteria =	#REF!
Percent Consecutive Days in Growing Season =	#REF!
Total Days Meeting Criteria =	193.5
Percent Cumulative Days in Growing Season =	91.3%
Number of Instances Meeting Criteria =	375

Date	Time	Gage Pressure Reading (psi)	Barotroll Pressure (psi)	Pressure Difference (psi)	Depth of Water (ft)	Point of Zero Flow (in)	Depth to Groundwater (ft)	Water Level Depth (in)	Rainfall (in)	2012 Flag	2012 Count
12/6/2012	14:32:00	14.603	14.555	0.048	0.111	4.32	0.249	-2.99		1.00	#REF!
12/6/2012	14:47:00	14.805	14.553	0.252	0.581	4.32	-0.221	2.66		1.00	#REF!
12/6/2012	15:02:00	14.799	14.551	0.248	0.572	4.32	-0.212	2.55		1.00	#REF!
12/6/2012	15:17:00	14.806	14.552	0.254	0.586	4.32	-0.226	2.71		1.00	#REF!
12/6/2012	15:32:00	14.798	14.559	0.239	0.551	4.32	-0.191	2.30		1.00	#REF!
12/6/2012	15:47:00	14.802	14.555	0.247	0.570	4.32	-0.210	2.52		1.00	#REF!
12/6/2012	16:02:00	14.802	14.559	0.243	0.561	4.32	-0.201	2.41		1.00	#REF!
12/6/2012	16:17:00	14.805	14.555	0.250	0.577	4.32	-0.217	2.60		1.00	#REF!
12/6/2012	16:32:00	14.806	14.557	0.249	0.574	4.32	-0.214	2.57		1.00	#REF!
12/6/2012	16:47:00	14.803	14.561	0.242	0.558	4.32	-0.198	2.38		1.00	#REF!
12/6/2012	17:02:00	14.806	14.560	0.246	0.568	4.32	-0.208	2.49		1.00	#REF!
12/6/2012	17:17:00	14.803	14.556	0.247	0.570	4.32	-0.210	2.52		1.00	#REF!
12/6/2012	17:32:00	14.808	14.558	0.250	0.577	4.32	-0.217	2.60			
12/6/2012	17:47:00	14.806	14.568	0.238	0.549	4.32	-0.189	2.27			
12/6/2012	18:02:00	14.806	14.565	0.241	0.556	4.32	-0.196	2.35			
12/6/2012	18:17:00	14.805	14.559	0.246	0.568	4.32	-0.208	2.49			
12/6/2012	18:32:00	14.806	14.560	0.246	0.568	4.32	-0.208	2.49			
12/6/2012	18:47:00	14.807	14.560	0.247	0.570	4.32	-0.210	2.52			
12/6/2012	19:02:00	14.809	14.566	0.243	0.561	4.32	-0.201	2.41			
12/6/2012	19:17:00	14.811	14.563	0.248	0.572	4.32	-0.212	2.55			
12/6/2012	19:32:00	14.813	14.567	0.246	0.568	4.32	-0.208	2.49			
12/6/2012	19:47:00	14.815	14.566	0.249	0.574	4.32	-0.214	2.57			
12/6/2012	20:02:00	14.811	14.566	0.245	0.565	4.32	-0.205	2.46			
12/6/2012	20:17:00	14.807	14.561	0.246	0.568	4.32	-0.208	2.49			
12/6/2012	20:32:00	14.805	14.559	0.246	0.568	4.32	-0.208	2.49			
12/6/2012	20:47:00	14.806	14.559	0.247	0.570	4.32	-0.210	2.52			
12/6/2012	21:02:00	14.802	14.556	0.246	0.568	4.32	-0.208	2.49			
12/6/2012	21:17:00	14.806	14.557	0.249	0.574	4.32	-0.214	2.57			
12/6/2012	21:32:00	14.802	14.553	0.249	0.574	4.32	-0.214	2.57			
12/6/2012	21:47:00	14.801	14.556	0.245	0.565	4.32	-0.205	2.46			
12/6/2012	22:02:00	14.801	14.548	0.253	0.584	4.32	-0.224	2.68			
12/6/2012	22:17:00	14.797	14.550	0.247	0.570	4.32	-0.210	2.52			
12/6/2012	22:32:00	14.798	14.554	0.244	0.563	4.32	-0.203	2.43			
12/6/2012	22:47:00	14.801	14.556	0.245	0.565	4.32	-0.205	2.46			
12/6/2012	23:02:00	14.801	14.554	0.247	0.570	4.32	-0.210	2.52			
12/6/2012	23:17:00	14.802	14.555	0.247	0.570	4.32	-0.210	2.52			
12/6/2012	23:32:00	14.800	14.551	0.249	0.574	4.32	-0.214	2.57			
12/6/2012	23:47:00	14.797	14.547	0.250	0.577	4.32	-0.217	2.60			
12/7/2012	0:02:00	14.798	14.553	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	0:17:00	14.797	14.548	0.249	0.574	4.32	-0.214	2.57			
12/7/2012	0:32:00	14.794	14.544	0.250	0.577	4.32	-0.217	2.60			
12/7/2012	0:47:00	14.790	14.539	0.251	0.579	4.32	-0.219	2.63			
12/7/2012	1:02:00	14.787	14.540	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	1:17:00	14.791	14.537	0.254	0.586	4.32	-0.226	2.71			
12/7/2012	1:32:00	14.785	14.533	0.252	0.581	4.32	-0.221	2.66			
12/7/2012	1:47:00	14.780	14.538	0.242	0.558	4.32	-0.198	2.38			
12/7/2012	2:02:00	14.780	14.538	0.242	0.558	4.32	-0.198	2.38			
12/7/2012	2:17:00	14.778	14.538	0.240	0.554	4.32	-0.194	2.32			
12/7/2012	2:32:00	14.781	14.534	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	2:47:00	14.775	14.531	0.244	0.563	4.32	-0.203	2.43			
12/7/2012	3:02:00	14.780	14.529	0.251	0.579	4.32	-0.219	2.63			
12/7/2012	3:17:00	14.776	14.531	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	3:32:00	14.773	14.526	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	3:47:00	14.773	14.528	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	4:02:00	14.772	14.525	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	4:17:00	14.767	14.522	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	4:32:00	14.768	14.519	0.249	0.574	4.32	-0.214	2.57			
12/7/2012	4:47:00	14.768	14.525	0.243	0.561	4.32	-0.201	2.41			
12/7/2012	5:02:00	14.771	14.518	0.253	0.584	4.32	-0.224	2.68			
12/7/2012	5:17:00	14.767	14.519	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	5:32:00	14.763	14.519	0.244	0.563	4.32	-0.203	2.43			
12/7/2012	5:47:00	14.764	14.516	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	6:02:00	14.767	14.515	0.252	0.581	4.32	-0.221	2.66			
12/7/2012	6:17:00	14.772	14.523	0.249	0.574	4.32	-0.214	2.57			
12/7/2012	6:32:00	14.767	14.522	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	6:47:00	14.768	14.525	0.243	0.561	4.32	-0.201	2.41			
12/7/2012	7:02:00	14.769	14.522	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	7:17:00	14.766	14.522	0.244	0.563	4.32	-0.203	2.43			
12/7/2012	7:32:00	14.770	14.523	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	7:47:00	14.766	14.521	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	8:02:00	14.767	14.521	0.246	0.568	4.32	-0.208	2.49			
12/7/2012	8:17:00	14.767	14.519	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	8:32:00	14.767	14.521	0.246	0.568	4.32	-0.208	2.49			
12/7/2012	8:47:00	14.770	14.519	0.251	0.579	4.32	-0.219	2.63			
12/7/2012	9:02:00	14.770	14.524	0.246	0.568	4.32	-0.208	2.49			
12/7/2012	9:17:00	14.774	14.518	0.256	0.591	4.32	-0.231	2.77			
12/7/2012	9:32:00	14.772	14.524	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	9:47:00	14.771	14.524	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	10:02:00	14.771	14.525	0.246	0.568	4.32	-0.208	2.49			
12/7/2012	10:17:00	14.770	14.520	0.250	0.577	4.32	-0.217	2.60			
12/7/2012	10:32:00	14.769	14.524	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	10:47:00	14.768	14.518	0.250	0.577	4.32	-0.217	2.60			
12/7/2012	11:02:00	14.766	14.516	0.250	0.577	4.32	-0.217	2.60			
12/7/2012	11:17:00	14.763	14.514	0.249	0.574	4.32	-0.214	2.57			
12/7/2012	11:32:00	14.757	14.511	0.246	0.568	4.32	-0.208	2.49			
12/7/2012	11:47:00	14.754	14.506	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	12:02:00	14.748	14.495	0.253	0.584	4.32	-0.224	2.68			
12/7/2012	12:17:00	14.740	14.492	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	12:32:00	14.742	14.490	0.252	0.581	4.32	-0.221	2.66			
12/7/2012	12:47:00	14.734	14.488	0.246	0.568	4.32	-0.208	2.49			
12/7/2012	13:02:00	14.738	14.481	0.257	0.593	4.32	-0.233	2.79			
12/7/2012	13:17:00	14.728	14.477	0.251	0.579	4.32	-0.219	2.63			
12/7/2012	13:32:00	14.726	14.477	0.249	0.574	4.32	-0.214	2.57			
12/7/2012	13:47:00	14.727	14.477	0.250	0.577	4.32	-0.217	2.60			
12/7/2012	14:02:00	14.717	14.476	0.241	0.556	4.32	-0.196	2.35			
12/7/2012	14:17:00	14.723	14.471	0.252	0.581	4.32	-0.221	2.66			
12/7/2012	14:32:00	14.719	14.467	0.252	0.581	4.32	-0.221	2.66			
12/7/2012	14:47:00	14.714	14.469	0.245	0.565	4.32	-0.205	2.46			
12/7/2012	15:02:00	14.712	14.471	0.241	0.556	4.32	-0.196	2.35			
12/7/2012	15:17:00	14.716	14.465	0.251	0.579	4.32	-0.219	2.63			
12/7/2012	15:32:00	14.715	14.468	0.247	0.570	4.32	-0.210	2.52			
12/7/2012	15:47:00	14.717	14.467	0.250	0.577	4.32	-0.217	2.60			
12/7/2012	16:02:00	14.713	14.470	0.243	0.561	4.32	-0.201	2.41			
12/7/2012	16:17:00	14.719	14.471	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	16:32:00	14.721	14.470	0.251	0.579	4.32	-0.219	2.63			
12/7/2012	16:47:00	14.717	14.466	0.251	0.579	4.32	-0.219	2.63			
12/7/2012	17:02:00	14.715	14.469	0.246	0.568	4.32	-0.208	2.49			
12/7/2012	17:17:00	14.715	14.473	0.242	0.558	4.32	-0.198	2.38			
12/7/2012	17:32:00	14.721	14.472	0.249	0.574	4.32	-0.214	2.57			
12/7/2012	17:47:00	14.716	14.474	0.242	0.558	4.32	-0.198	2.38			
12/7/2012	18:02:00	14.723	14.475	0.248	0.572	4.32	-0.212	2.55			
12/7/2012	18:17:00	14.725	14.469	0.256	0.591	4.32	-0.231	2.77			
12/7/2012	18:32:00	14.723	14.471	0.252	0.581	4.32	-0.221	2.66			
12/7/2012	18:47:00	14.720	14.471	0.249	0.574	4.32	-0.214	2.57			
12/7/2012	19:02:00	14.718	14.473	0.245	0.565	4.32	-0.205	2.46			

12/7/2012	19:17:00	14.722	14.472	0.250	0.577	4.32	-0.217	2.60
12/7/2012	19:32:00	14.720	14.471	0.249	0.574	4.32	-0.214	2.57
12/7/2012	19:47:00	14.718	14.466	0.252	0.581	4.32	-0.221	2.66
12/7/2012	20:02:00	14.721	14.470	0.251	0.579	4.32	-0.219	2.63
12/7/2012	20:17:00	14.717	14.465	0.252	0.581	4.32	-0.221	2.66
12/7/2012	20:32:00	14.717	14.465	0.252	0.581	4.32	-0.221	2.66
12/7/2012	20:47:00	14.716	14.469	0.247	0.570	4.32	-0.210	2.52
12/7/2012	21:02:00	14.720	14.468	0.252	0.581	4.32	-0.221	2.66
12/7/2012	21:17:00	14.718	14.466	0.252	0.581	4.32	-0.221	2.66
12/7/2012	21:32:00	14.719	14.464	0.255	0.588	4.32	-0.228	2.74
12/7/2012	21:47:00	14.719	14.467	0.252	0.581	4.32	-0.221	2.66
12/7/2012	22:02:00	14.720	14.466	0.254	0.586	4.32	-0.226	2.71
12/7/2012	22:17:00	14.719	14.467	0.252	0.581	4.32	-0.221	2.66
12/7/2012	22:32:00	14.717	14.467	0.250	0.577	4.32	-0.217	2.60
12/7/2012	22:47:00	14.720	14.469	0.251	0.579	4.32	-0.219	2.63
12/7/2012	23:02:00	14.718	14.470	0.248	0.572	4.32	-0.212	2.55
12/7/2012	23:17:00	14.719	14.470	0.249	0.574	4.32	-0.214	2.57
12/7/2012	23:32:00	14.716	14.468	0.248	0.572	4.32	-0.212	2.55
12/7/2012	23:47:00	14.718	14.467	0.251	0.579	4.32	-0.219	2.63
12/8/2012	0:02:00	14.712	14.463	0.249	0.574	4.32	-0.214	2.57
12/8/2012	0:17:00	14.715	14.467	0.248	0.572	4.32	-0.212	2.55
12/8/2012	0:32:00	14.715	14.459	0.256	0.591	4.32	-0.231	2.77
12/8/2012	0:47:00	14.711	14.465	0.246	0.568	4.32	-0.208	2.49
12/8/2012	1:02:00	14.710	14.459	0.251	0.579	4.32	-0.219	2.63
12/8/2012	1:17:00	14.715	14.459	0.256	0.591	4.32	-0.231	2.77
12/8/2012	1:32:00	14.708	14.465	0.243	0.561	4.32	-0.201	2.41
12/8/2012	1:47:00	14.714	14.461	0.253	0.584	4.32	-0.224	2.68
12/8/2012	2:02:00	14.709	14.465	0.244	0.563	4.32	-0.203	2.43
12/8/2012	2:17:00	14.712	14.464	0.248	0.572	4.32	-0.212	2.55
12/8/2012	2:32:00	14.711	14.459	0.252	0.581	4.32	-0.221	2.66
12/8/2012	2:47:00	14.715	14.458	0.257	0.593	4.32	-0.233	2.79
12/8/2012	3:02:00	14.712	14.454	0.258	0.595	4.32	-0.235	2.82
12/8/2012	3:17:00	14.708	14.459	0.249	0.574	4.32	-0.214	2.57
12/8/2012	3:32:00	14.707	14.461	0.246	0.568	4.32	-0.208	2.49
12/8/2012	3:47:00	14.701	14.454	0.247	0.570	4.32	-0.210	2.52
12/8/2012	4:02:00	14.704	14.459	0.245	0.565	4.32	-0.205	2.46
12/8/2012	4:17:00	14.707	14.454	0.253	0.584	4.32	-0.224	2.68
12/8/2012	4:32:00	14.697	14.452	0.245	0.565	4.32	-0.205	2.46
12/8/2012	4:47:00	14.701	14.459	0.242	0.558	4.32	-0.198	2.38
12/8/2012	5:02:00	14.707	14.456	0.251	0.579	4.32	-0.219	2.63
12/8/2012	5:17:00	14.708	14.458	0.250	0.577	4.32	-0.217	2.60
12/8/2012	5:32:00	14.708	14.459	0.249	0.574	4.32	-0.214	2.57
12/8/2012	5:47:00	14.707	14.464	0.243	0.561	4.32	-0.201	2.41
12/8/2012	6:02:00	14.709	14.469	0.240	0.554	4.32	-0.194	2.32
12/8/2012	6:17:00	14.714	14.467	0.247	0.570	4.32	-0.210	2.52
12/8/2012	6:32:00	14.716	14.468	0.248	0.572	4.32	-0.212	2.55
12/8/2012	6:47:00	14.715	14.463	0.252	0.581	4.32	-0.221	2.66
12/8/2012	7:02:00	14.717	14.469	0.248	0.572	4.32	-0.212	2.55
12/8/2012	7:17:00	14.717	14.467	0.250	0.577	4.32	-0.217	2.60
12/8/2012	7:32:00	14.715	14.466	0.249	0.574	4.32	-0.214	2.57
12/8/2012	7:47:00	14.717	14.469	0.248	0.572	4.32	-0.212	2.55
12/8/2012	8:02:00	14.722	14.477	0.245	0.565	4.32	-0.205	2.46
12/8/2012	8:17:00	14.717	14.481	0.236	0.544	4.32	-0.184	2.21
12/8/2012	8:32:00	14.720	14.479	0.241	0.556	4.32	-0.196	2.35
12/8/2012	8:47:00	14.724	14.477	0.247	0.570	4.32	-0.210	2.52
12/8/2012	9:02:00	14.730	14.484	0.246	0.568	4.32	-0.208	2.49
12/8/2012	9:17:00	14.729	14.481	0.248	0.572	4.32	-0.212	2.55
12/8/2012	9:32:00	14.731	14.484	0.247	0.570	4.32	-0.210	2.52
12/8/2012	9:47:00	14.738	14.488	0.250	0.577	4.32	-0.217	2.60
12/8/2012	10:02:00	14.737	14.488	0.249	0.574	4.32	-0.214	2.57
12/8/2012	10:17:00	14.741	14.486	0.255	0.588	4.32	-0.228	2.74
12/8/2012	10:32:00	14.733	14.486	0.247	0.570	4.32	-0.210	2.52
12/8/2012	10:47:00	14.733	14.486	0.247	0.570	4.32	-0.210	2.52
12/8/2012	11:02:00	14.731	14.486	0.245	0.565	4.32	-0.205	2.46
12/8/2012	11:17:00	14.734	14.482	0.252	0.581	4.32	-0.221	2.66
12/8/2012	11:32:00	14.730	14.478	0.252	0.581	4.32	-0.221	2.66
12/8/2012	11:47:00	14.730	14.475	0.255	0.588	4.32	-0.228	2.74
12/8/2012	12:02:00	14.719	14.468	0.251	0.579	4.32	-0.219	2.63
12/8/2012	12:17:00	14.713	14.464	0.249	0.574	4.32	-0.214	2.57
12/8/2012	12:32:00	14.716	14.465	0.251	0.579	4.32	-0.219	2.63
12/8/2012	12:47:00	14.714	14.466	0.248	0.572	4.32	-0.212	2.55
12/8/2012	13:02:00	14.708	14.457	0.251	0.579	4.32	-0.219	2.63
12/8/2012	13:17:00	14.710	14.462	0.248	0.572	4.32	-0.212	2.55
12/8/2012	13:32:00	14.707	14.452	0.255	0.588	4.32	-0.228	2.74
12/8/2012	13:47:00	14.706	14.452	0.254	0.586	4.32	-0.226	2.71
12/8/2012	14:02:00	14.703	14.451	0.252	0.581	4.32	-0.221	2.66
12/8/2012	14:17:00	14.704	14.454	0.250	0.577	4.32	-0.217	2.60
12/8/2012	14:32:00	14.704	14.458	0.246	0.568	4.32	-0.208	2.49
12/8/2012	14:47:00	14.702	14.455	0.247	0.570	4.32	-0.210	2.52
12/8/2012	15:02:00	14.706	14.454	0.252	0.581	4.32	-0.221	2.66
12/8/2012	15:17:00	14.702	14.457	0.245	0.565	4.32	-0.205	2.46
12/8/2012	15:32:00	14.705	14.459	0.246	0.568	4.32	-0.208	2.49
12/8/2012	15:47:00	14.708	14.456	0.252	0.581	4.32	-0.221	2.66
12/8/2012	16:02:00	14.706	14.454	0.252	0.581	4.32	-0.221	2.66
12/8/2012	16:17:00	14.702	14.457	0.245	0.565	4.32	-0.205	2.46
12/8/2012	16:32:00	14.707	14.461	0.246	0.568	4.32	-0.208	2.49
12/8/2012	16:47:00	14.711	14.459	0.252	0.581	4.32	-0.221	2.66
12/8/2012	17:02:00	14.710	14.458	0.252	0.581	4.32	-0.221	2.66
12/8/2012	17:17:00	14.713	14.461	0.252	0.581	4.32	-0.221	2.66
12/8/2012	17:32:00	14.716	14.461	0.255	0.588	4.32	-0.228	2.74
12/8/2012	17:47:00	14.708	14.467	0.241	0.556	4.32	-0.196	2.35
12/8/2012	18:02:00	14.715	14.464	0.251	0.579	4.32	-0.219	2.63
12/8/2012	18:17:00	14.720	14.467	0.253	0.584	4.32	-0.224	2.68
12/8/2012	18:32:00	14.716	14.466	0.250	0.577	4.32	-0.217	2.60
12/8/2012	18:47:00	14.716	14.468	0.248	0.572	4.32	-0.212	2.55
12/8/2012	19:02:00	14.719	14.466	0.253	0.584	4.32	-0.224	2.68
12/8/2012	19:17:00	14.716	14.473	0.243	0.561	4.32	-0.201	2.41
12/8/2012	19:32:00	14.722	14.469	0.253	0.584	4.32	-0.224	2.68
12/8/2012	19:47:00	14.715	14.469	0.246	0.568	4.32	-0.208	2.49
12/8/2012	20:02:00	14.717	14.469	0.248	0.572	4.32	-0.212	2.55
12/8/2012	20:17:00	14.720	14.472	0.248	0.572	4.32	-0.212	2.55
12/8/2012	20:32:00	14.720	14.474	0.246	0.568	4.32	-0.208	2.49
12/8/2012	20:47:00	14.717	14.475	0.242	0.558	4.32	-0.198	2.38
12/8/2012	21:02:00	14.724	14.475	0.249	0.574	4.32	-0.214	2.57
12/8/2012	21:17:00	14.722	14.479	0.243	0.561	4.32	-0.201	2.41
12/8/2012	21:32:00	14.723	14.472	0.251	0.579	4.32	-0.219	2.63
12/8/2012	21:47:00	14.720	14.477	0.243	0.561	4.32	-0.201	2.41
12/8/2012	22:02:00	14.723	14.478	0.245	0.565	4.32	-0.205	2.46
12/8/2012	22:17:00	14.728	14.476	0.252	0.581	4.32	-0.221	2.66
12/8/2012	22:32:00	14.722	14.481	0.241	0.556	4.32	-0.196	2.35
12/8/2012	22:47:00	14.724	14.481	0.243	0.561	4.32	-0.201	2.41
12/8/2012	23:02:00	14.728	14.483	0.245	0.565	4.32	-0.205	2.46
12/8/2012	23:17:00	14.730	14.485	0.245	0.565	4.32	-0.205	2.46
12/8/2012	23:32:00	14.729	14.488	0.241	0.556	4.32	-0.196	2.35
12/8/2012	23:47:00	14.729	14.493	0.236	0.544	4.32	-0.184	2.21
12/9/2012	0:02:00	14.734	14.487	0.247	0.570	4.32	-0.210	2.52
12/9/2012	0:17:00	14.729	14.485	0.244	0.563	4.32	-0.203	2.43
12/9/2012	0:32:00	14.732	14.483	0.249	0.574	4.32	-0.214	2.57
12/9/2012	0:47:00	14.729	14.486	0.243	0.561	4.32	-0.201	2.41
12/9/2012	1:02:00	14.730	14.486	0.244	0.563	4.32	-0.203	2.43
12/9/2012	1:17:00	14.732	14.488	0.244	0.563	4.32	-0.203	2.43
12/9/2012	1:32:00	14.729	14.486	0.243	0.561	4.32	-0.201	2.41
12/9/2012	1:47:00	14.737	14.483	0.254	0.586	4.32	-0.226	2.71
12/9/2012	2:02:00	14.738	14.492	0.246	0.568	4.32	-0.208	2.49
12/9/2012	2:17:00	14.733	14.488	0.245	0.565	4.32	-0.205	2.46
12/9/2012	2:32:00	14.735	14.491	0.244	0.563	4.32	-0.203	2.43
12/9/2012	2:47:00	14.736	14.491	0.245	0.565	4.32	-0.205	2.46
12/9/2012	3:02:00	14.737	14.494	0.243	0.561	4.32	-0.201	2.41
12/9/2012	3:17:00	14.735	14.493	0.242	0.558	4.32	-0.198	2.38
12/9/2012	3:32:00	14.740	14.488	0.252	0.581	4.32	-0.221	2.66
12/9/2012	3:47:00	14.740	14.491	0.249	0.574	4.32	-0.214	2.57
12/9/2012	4:02:00	14.733	14.489	0.244	0.563	4.32	-0.203	2.43
12/9/2012	4:17:00	14.734	14.489	0.245	0.565	4.32	-0.205	2.46

12/9/2012	4:32:00	14.732	14.493	0.239	0.551	4.32	-0.191	2.30			
12/9/2012	4:47:00	14.738	14.490	0.248	0.572	4.32	-0.212	2.55			
12/9/2012	5:02:00	14.737	14.489	0.248	0.572	4.32	-0.212	2.55			
12/9/2012	5:17:00	14.739	14.497	0.242	0.558	4.32	-0.198	2.38			
12/9/2012	5:32:00	14.740	14.499	0.241	0.556	4.32	-0.196	2.35			
12/9/2012	5:47:00	14.746	14.497	0.249	0.574	4.32	-0.214	2.57			
12/9/2012	6:02:00	14.747	14.500	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	6:17:00	14.751	14.502	0.249	0.574	4.32	-0.214	2.57			
12/9/2012	6:32:00	14.748	14.500	0.248	0.572	4.32	-0.212	2.55			
12/9/2012	6:47:00	14.751	14.501	0.250	0.577	4.32	-0.217	2.60			
12/9/2012	7:02:00	14.751	14.505	0.246	0.568	4.32	-0.208	2.49			
12/9/2012	7:17:00	14.755	14.504	0.251	0.579	4.32	-0.219	2.63			
12/9/2012	7:32:00	14.760	14.505	0.255	0.588	4.32	-0.228	2.74			
12/9/2012	7:47:00	14.754	14.508	0.246	0.568	4.32	-0.208	2.49			
12/9/2012	8:02:00	14.756	14.512	0.244	0.563	4.32	-0.203	2.43			
12/9/2012	8:17:00	14.754	14.510	0.244	0.563	4.32	-0.203	2.43			
12/9/2012	8:32:00	14.757	14.517	0.240	0.554	4.32	-0.194	2.32			
12/9/2012	8:47:00	14.754	14.511	0.243	0.561	4.32	-0.201	2.41			
12/9/2012	9:02:00	14.756	14.515	0.241	0.556	4.32	-0.196	2.35			
12/9/2012	9:17:00	14.754	14.512	0.242	0.558	4.32	-0.198	2.38			
12/9/2012	9:32:00	14.757	14.517	0.240	0.554	4.32	-0.194	2.32			
12/9/2012	9:47:00	14.759	14.519	0.240	0.554	4.32	-0.194	2.32			
12/9/2012	10:02:00	14.765	14.513	0.252	0.581	4.32	-0.221	2.66			
12/9/2012	10:17:00	14.759	14.516	0.243	0.561	4.32	-0.201	2.41			
12/9/2012	10:32:00	14.753	14.513	0.240	0.554	4.32	-0.194	2.32			
12/9/2012	10:47:00	14.754	14.515	0.239	0.551	4.32	-0.191	2.30			
12/9/2012	11:02:00	14.756	14.504	0.252	0.581	4.32	-0.221	2.66			
12/9/2012	11:17:00	14.752	14.506	0.246	0.568	4.32	-0.208	2.49			
12/9/2012	11:32:00	14.748	14.501	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	11:47:00	14.752	14.507	0.245	0.565	4.32	-0.205	2.46			
12/9/2012	12:02:00	14.744	14.493	0.251	0.579	4.32	-0.219	2.63			
12/9/2012	12:17:00	14.738	14.494	0.244	0.563	4.32	-0.203	2.43			
12/9/2012	12:32:00	14.737	14.491	0.246	0.568	4.32	-0.208	2.49			
12/9/2012	12:47:00	14.737	14.488	0.249	0.574	4.32	-0.214	2.57			
12/9/2012	13:02:00	14.731	14.485	0.246	0.568	4.32	-0.208	2.49			
12/9/2012	13:17:00	14.729	14.481	0.248	0.572	4.32	-0.212	2.55			
12/9/2012	13:32:00	14.731	14.481	0.250	0.577	4.32	-0.217	2.60			
12/9/2012	13:47:00	14.725	14.481	0.244	0.563	4.32	-0.203	2.43			
12/9/2012	14:02:00	14.724	14.477	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	14:17:00	14.719	14.472	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	14:32:00	14.718	14.473	0.245	0.565	4.32	-0.205	2.46			
12/9/2012	14:47:00	14.720	14.474	0.246	0.568	4.32	-0.208	2.49			
12/9/2012	15:02:00	14.726	14.477	0.249	0.574	4.32	-0.214	2.57			
12/9/2012	15:17:00	14.729	14.479	0.250	0.577	4.32	-0.217	2.60			
12/9/2012	15:32:00	14.723	14.478	0.245	0.565	4.32	-0.205	2.46			
12/9/2012	15:47:00	14.723	14.479	0.244	0.563	4.32	-0.203	2.43			
12/9/2012	16:02:00	14.725	14.476	0.249	0.574	4.32	-0.214	2.57			
12/9/2012	16:17:00	14.727	14.476	0.251	0.579	4.32	-0.219	2.63			
12/9/2012	16:32:00	14.726	14.473	0.253	0.584	4.32	-0.224	2.68			
12/9/2012	16:47:00	14.727	14.473	0.254	0.586	4.32	-0.226	2.71			
12/9/2012	17:02:00	14.721	14.474	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	17:17:00	14.724	14.477	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	17:32:00	14.722	14.478	0.244	0.563	4.32	-0.203	2.43			
12/9/2012	17:47:00	14.730	14.483	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	18:02:00	14.721	14.476	0.245	0.565	4.32	-0.205	2.46			
12/9/2012	18:17:00	14.722	14.471	0.251	0.579	4.32	-0.219	2.63			
12/9/2012	18:32:00	14.726	14.472	0.254	0.586	4.32	-0.226	2.71			
12/9/2012	18:47:00	14.726	14.469	0.257	0.593	4.32	-0.233	2.79			
12/9/2012	19:02:00	14.726	14.473	0.253	0.584	4.32	-0.224	2.68			
12/9/2012	19:17:00	14.725	14.475	0.250	0.577	4.32	-0.217	2.60			
12/9/2012	19:32:00	14.722	14.478	0.244	0.563	4.32	-0.203	2.43			
12/9/2012	19:47:00	14.724	14.474	0.250	0.577	4.32	-0.217	2.60			
12/9/2012	20:02:00	14.724	14.476	0.248	0.572	4.32	-0.212	2.55			
12/9/2012	20:17:00	14.721	14.469	0.252	0.581	4.32	-0.221	2.66			
12/9/2012	20:32:00	14.720	14.471	0.249	0.574	4.32	-0.214	2.57			
12/9/2012	20:47:00	14.718	14.469	0.249	0.574	4.32	-0.214	2.57			
12/9/2012	21:02:00	14.716	14.469	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	21:17:00	14.714	14.466	0.248	0.572	4.32	-0.212	2.55			
12/9/2012	21:32:00	14.708	14.458	0.250	0.577	4.32	-0.217	2.60			
12/9/2012	21:47:00	14.708	14.461	0.247	0.570	4.32	-0.210	2.52			
12/9/2012	22:02:00	14.704	14.459	0.245	0.565	4.32	-0.205	2.46			
12/9/2012	22:17:00	14.708	14.456	0.252	0.581	4.32	-0.221	2.66			
12/9/2012	22:32:00	14.705	14.454	0.251	0.579	4.32	-0.219	2.63			
12/9/2012	22:47:00	14.703	14.455	0.248	0.572	4.32	-0.212	2.55			
12/9/2012	23:02:00	14.708	14.448	0.260	0.600	4.32	-0.240	2.88			
12/9/2012	23:17:00	14.700	14.450	0.250	0.577	4.32	-0.217	2.60			
12/9/2012	23:32:00	14.701	14.447	0.254	0.586	4.32	-0.226	2.71			
12/9/2012	23:47:00	14.696	14.443	0.253	0.584	4.32	-0.224	2.68			
12/10/2012	0:02:00	14.696	14.445	0.251	0.579	4.32	-0.219	2.63			
12/10/2012	0:17:00	14.691	14.441	0.250	0.577	4.32	-0.217	2.60			
12/10/2012	0:32:00	14.692	14.439	0.253	0.584	4.32	-0.224	2.68			
12/10/2012	0:47:00	14.687	14.445	0.242	0.558	4.32	-0.198	2.38			
12/10/2012	1:02:00	14.686	14.436	0.250	0.577	4.32	-0.217	2.60			
12/10/2012	1:17:00	14.686	14.436	0.250	0.577	4.32	-0.217	2.60			
12/10/2012	1:32:00	14.678	14.428	0.250	0.577	4.32	-0.217	2.60			
12/10/2012	1:47:00	14.678	14.428	0.250	0.577	4.32	-0.217	2.60			
12/10/2012	2:02:00	14.673	14.424	0.249	0.574	4.32	-0.214	2.57			
12/10/2012	2:17:00	14.674	14.423	0.251	0.579	4.32	-0.219	2.63			
12/10/2012	2:32:00	14.674	14.423	0.251	0.579	4.32	-0.219	2.63			
12/10/2012	2:47:00	14.672	14.425	0.247	0.570	4.32	-0.210	2.52			
12/10/2012	3:02:00	14.672	14.419	0.253	0.584	4.32	-0.224	2.68			
12/10/2012	3:17:00	14.659	14.418	0.241	0.556	4.32	-0.196	2.35			
12/10/2012	3:32:00	14.661	14.413	0.248	0.572	4.32	-0.212	2.55			
12/10/2012	3:47:00	14.661	14.413	0.248	0.572	4.32	-0.212	2.55			
12/10/2012	4:02:00	14.655	14.410	0.245	0.565	4.32	-0.205	2.46			
12/10/2012	4:17:00	14.653	14.404	0.249	0.574	4.32	-0.214	2.57			
12/10/2012	4:32:00	14.655	14.406	0.249	0.574	4.32	-0.214	2.57			
12/10/2012	4:47:00	14.652	14.396	0.256	0.591	4.32	-0.231	2.77			
12/10/2012	5:02:00	14.645	14.401	0.244	0.563	4.32	-0.203	2.43			
12/10/2012	5:17:00	14.647	14.399	0.248	0.572	4.32	-0.212	2.55			
12/10/2012	5:32:00	14.645	14.397	0.248	0.572	4.32	-0.212	2.55			
12/10/2012	5:47:00	14.640	14.397	0.243	0.561	4.32	-0.201	2.41			
12/10/2012	6:02:00	14.642	14.394	0.248	0.572	4.32	-0.212	2.55			
12/10/2012	6:17:00	14.639	14.397	0.242	0.558	4.32	-0.198	2.38			
12/10/2012	6:32:00	14.640	14.392	0.248	0.572	4.32	-0.212	2.55			
12/10/2012	6:47:00	14.637	14.395	0.242	0.558	4.32	-0.198	2.38			
12/10/2012	7:02:00	14.642	14.393	0.249	0.574	4.32	-0.214	2.57			
12/10/2012	7:17:00	14.639	14.394	0.245	0.565	4.32	-0.205	2.46			
12/10/2012	7:32:00	14.637	14.393	0.244	0.563	4.32	-0.203	2.43			
12/10/2012	7:47:00	14.632	14.387	0.245	0.565	4.32	-0.205	2.46			
12/10/2012	8:02:00	14.636	14.391	0.245	0.565	4.32	-0.205	2.46			
12/10/2012	8:17:00	14.629	14.386	0.243	0.561	4.32	-0.201	2.41			
12/10/2012	8:32:00	14.632	14.393	0.239	0.551	4.32	-0.191	2.30		1.00	0.5
12/10/2012	8:47:00	14.630	14.389	0.241	0.556	4.32	-0.196	2.35		1.00	1.0
12/10/2012	9:02:00	14.630	14.390	0.240	0.554	4.32	-0.194	2.32		1.00	1.5
12/10/2012	9:17:00	14.634	14.392	0.242	0.558	4.32	-0.198	2.38		1.00	2.0
12/10/2012	9:32:00	14.636	14.393	0.243	0.561	4.32	-0.201	2.41		1.00	2.5
12/10/2012	9:47:00	14.636	14.386	0.250	0.577	4.32	-0.217	2.60		1.00	3.0
12/10/2012	10:02:00	14.632	14.393	0.239	0.551	4.32	-0.191	2.30		1.00	3.5
12/10/2012	10:17:00	14.635	14.391	0.244	0.563	4.32	-0.203	2.43		1.00	4.0
12/10/2012	10:32:00	14.638	14.387	0.251	0.579	4.32	-0.219	2.63		1.00	4.5
12/10/2012	10:47:00	14.626	14.381	0.245	0.565	4.32	-0.205	2.46		1.00	5.0
12/10/2012	11:02:00	14.622	14.378	0.244	0.563	4.32	-0.203	2.43		1.00	5.5
12/10/2012	11:17:00	14.626	14.377	0.249	0.574	4.32	-0.214	2.57		1.00	6.0
12/10/2012	11:32:00	14.625	14.373	0.252	0.581	4.32	-0.221	2.66		1.00	6.5
12/10/2012	11:47:00	14.618	14.372	0.246	0.568	4.32	-0.208	2.49		1.00	7.0
12/10/2012	12:02:00	14.609	14.364	0.245	0.565	4.32	-0.205	2.46		1.00	7.5
12/10/2012	12:17:00	14.610	14.361	0.249	0.574	4.32	-0.214	2.57		1.00	8.0
12/10/2012	12:32:00	14.603	14.359	0.244	0.563	4.32	-0.203	2.43		1.00	8.5
12/10/2012	12:47:00	14.603	14.355	0.248	0.572	4.32	-0.212	2.55		1.00	9.0
12/10/2012	13:02:00	14.600	14.348	0.252	0.581	4.32	-0.221	2.66		1.00	9.5
12/10/2012	13:17:00	14.597	14.346	0.251	0.579	4.32	-0.219	2.63		1.00	10.0
12/10/2012	13:32:00	14.589	14.344	0.245	0.565	4.32	-0.205	2.46		1.00	10.5

12/10/2012	13:47:00	14.585	14.342	0.243	0.561	4.32	-0.201	2.41		1.00	11.0
12/10/2012	14:02:00	14.582	14.333	0.249	0.574	4.32	-0.214	2.57		1.00	11.5
12/10/2012	14:17:00	14.577	14.334	0.243	0.561	4.32	-0.201	2.41		1.00	12.0
12/10/2012	14:32:00	14.580	14.335	0.245	0.565	4.32	-0.205	2.46		1.00	12.5
12/10/2012	14:47:00	14.584	14.336	0.248	0.572	4.32	-0.212	2.55		1.00	13.0
12/10/2012	15:02:00	14.584	14.333	0.251	0.579	4.32	-0.219	2.63		1.00	13.5
12/10/2012	15:17:00	14.581	14.323	0.258	0.595	4.32	-0.235	2.82		1.00	14.0
12/10/2012	15:32:00	14.580	14.332	0.248	0.572	4.32	-0.212	2.55		1.00	14.5
12/10/2012	15:47:00	14.578	14.326	0.252	0.581	4.32	-0.221	2.66		1.00	15.0
12/10/2012	16:02:00	14.576	14.329	0.247	0.570	4.32	-0.210	2.52		1.00	15.5
12/10/2012	16:17:00	14.575	14.331	0.244	0.563	4.32	-0.203	2.43		1.00	16.0
12/10/2012	16:32:00	14.574	14.320	0.254	0.586	4.32	-0.226	2.71		1.00	16.5
12/10/2012	16:47:00	14.575	14.325	0.250	0.577	4.32	-0.217	2.60		1.00	17.0
12/10/2012	17:02:00	14.575	14.337	0.238	0.549	4.32	-0.189	2.27		1.00	17.5
12/10/2012	17:17:00	14.581	14.331	0.250	0.577	4.32	-0.217	2.60		1.00	18.0
12/10/2012	17:32:00	14.585	14.336	0.249	0.574	4.32	-0.214	2.57		1.00	18.5
12/10/2012	17:47:00	14.588	14.350	0.238	0.549	4.32	-0.189	2.27		1.00	19.0
12/10/2012	18:02:00	14.589	14.349	0.240	0.554	4.32	-0.194	2.32		1.00	19.5
12/10/2012	18:17:00	14.588	14.343	0.245	0.565	4.32	-0.205	2.46		1.00	20.0
12/10/2012	18:32:00	14.588	14.334	0.254	0.586	4.32	-0.226	2.71		1.00	20.5
12/10/2012	18:47:00	14.585	14.335	0.250	0.577	4.32	-0.217	2.60		1.00	21.0
12/10/2012	19:02:00	14.585	14.345	0.240	0.554	4.32	-0.194	2.32		1.00	21.5
12/10/2012	19:17:00	14.585	14.338	0.247	0.570	4.32	-0.210	2.52		1.00	22.0
12/10/2012	19:32:00	14.582	14.341	0.241	0.556	4.32	-0.196	2.35		1.00	22.5
12/10/2012	19:47:00	14.578	14.337	0.241	0.556	4.32	-0.196	2.35		1.00	23.0
12/10/2012	20:02:00	14.583	14.340	0.243	0.561	4.32	-0.201	2.41		1.00	23.5
12/10/2012	20:17:00	14.583	14.334	0.249	0.574	4.32	-0.214	2.57		1.00	24.0
12/10/2012	20:32:00	14.575	14.334	0.241	0.556	4.32	-0.196	2.35		1.00	24.5
12/10/2012	20:47:00	14.573	14.335	0.238	0.549	4.32	-0.189	2.27		1.00	25.0
12/10/2012	21:02:00	14.576	14.336	0.240	0.554	4.32	-0.194	2.32		1.00	25.5
12/10/2012	21:17:00	14.581	14.333	0.248	0.572	4.32	-0.212	2.55		1.00	26.0
12/10/2012	21:32:00	14.577	14.331	0.246	0.568	4.32	-0.208	2.49		1.00	26.5
12/10/2012	21:47:00	14.574	14.325	0.249	0.574	4.32	-0.214	2.57		1.00	27.0
12/10/2012	22:02:00	14.569	14.322	0.247	0.570	4.32	-0.210	2.52		1.00	27.5
12/10/2012	22:17:00	14.571	14.330	0.241	0.556	4.32	-0.196	2.35		1.00	28.0
12/10/2012	22:32:00	14.573	14.330	0.243	0.561	4.32	-0.201	2.41		1.00	28.5
12/10/2012	22:47:00	14.576	14.332	0.244	0.563	4.32	-0.203	2.43		1.00	29.0
12/10/2012	23:02:00	14.580	14.338	0.242	0.558	4.32	-0.198	2.38		1.00	29.5
12/10/2012	23:17:00	14.574	14.335	0.239	0.551	4.32	-0.191	2.30		1.00	30.0
12/10/2012	23:32:00	14.579	14.338	0.241	0.556	4.32	-0.196	2.35		1.00	30.5
12/10/2012	23:47:00	14.579	14.330	0.249	0.574	4.32	-0.214	2.57		1.00	31.0
12/11/2012	0:02:00	14.574	14.335	0.239	0.551	4.32	-0.191	2.30		1.00	31.5
12/11/2012	0:17:00	14.577	14.342	0.235	0.542	4.32	-0.182	2.19		1.00	32.0
12/11/2012	0:32:00	14.579	14.333	0.246	0.568	4.32	-0.208	2.49		1.00	32.5
12/11/2012	0:47:00	14.576	14.332	0.244	0.563	4.32	-0.203	2.43		1.00	33.0
12/11/2012	1:02:00	14.580	14.334	0.246	0.568	4.32	-0.208	2.49		1.00	33.5
12/11/2012	1:17:00	14.573	14.330	0.243	0.561	4.32	-0.201	2.41		1.00	34.0
12/11/2012	1:32:00	14.582	14.336	0.246	0.568	4.32	-0.208	2.49		1.00	34.5
12/11/2012	1:47:00	14.583	14.334	0.249	0.574	4.32	-0.214	2.57		1.00	35.0
12/11/2012	2:02:00	14.580	14.343	0.237	0.547	4.32	-0.187	2.24		1.00	35.5
12/11/2012	2:17:00	14.589	14.348	0.241	0.556	4.32	-0.196	2.35		1.00	36.0
12/11/2012	2:32:00	14.593	14.346	0.247	0.570	4.32	-0.210	2.52		1.00	36.5
12/11/2012	2:47:00	14.592	14.347	0.245	0.565	4.32	-0.205	2.46		1.00	37.0
12/11/2012	3:02:00	14.591	14.347	0.244	0.563	4.32	-0.203	2.43		1.00	37.5
12/11/2012	3:17:00	14.594	14.346	0.248	0.572	4.32	-0.212	2.55		1.00	38.0
12/11/2012	3:32:00	14.596	14.346	0.250	0.577	4.32	-0.217	2.60		1.00	38.5
12/11/2012	3:47:00	14.596	14.352	0.244	0.563	4.32	-0.203	2.43		1.00	39.0
12/11/2012	4:02:00	14.595	14.357	0.238	0.549	4.32	-0.189	2.27		1.00	39.5
12/11/2012	4:17:00	14.603	14.360	0.243	0.561	4.32	-0.201	2.41		1.00	40.0
12/11/2012	4:32:00	14.598	14.358	0.240	0.554	4.32	-0.194	2.32		1.00	40.5
12/11/2012	4:47:00	14.608	14.366	0.242	0.558	4.32	-0.198	2.38		1.00	41.0
12/11/2012	5:02:00	14.607	14.360	0.247	0.570	4.32	-0.210	2.52		1.00	41.5
12/11/2012	5:17:00	14.611	14.365	0.246	0.568	4.32	-0.208	2.49		1.00	42.0
12/11/2012	5:32:00	14.613	14.368	0.245	0.565	4.32	-0.205	2.46		1.00	42.5
12/11/2012	5:47:00	14.617	14.372	0.245	0.565	4.32	-0.205	2.46		1.00	43.0
12/11/2012	6:02:00	14.616	14.374	0.242	0.558	4.32	-0.198	2.38		1.00	43.5
12/11/2012	6:17:00	14.621	14.376	0.245	0.565	4.32	-0.205	2.46		1.00	44.0
12/11/2012	6:32:00	14.618	14.375	0.243	0.561	4.32	-0.201	2.41		1.00	44.5
12/11/2012	6:47:00	14.622	14.371	0.251	0.579	4.32	-0.219	2.63		1.00	45.0
12/11/2012	7:02:00	14.622	14.379	0.243	0.561	4.32	-0.201	2.41		1.00	45.5
12/11/2012	7:17:00	14.629	14.386	0.243	0.561	4.32	-0.201	2.41		1.00	46.0
12/11/2012	7:32:00	14.627	14.392	0.235	0.542	4.32	-0.182	2.19		1.00	46.5
12/11/2012	7:47:00	14.634	14.396	0.238	0.549	4.32	-0.189	2.27		1.00	47.0
12/11/2012	8:02:00	14.638	14.397	0.241	0.556	4.32	-0.196	2.35		1.00	47.5
12/11/2012	8:17:00	14.647	14.402	0.245	0.565	4.32	-0.205	2.46		1.00	48.0
12/11/2012	8:32:00	14.648	14.403	0.245	0.565	4.32	-0.205	2.46		1.00	48.5
12/11/2012	8:47:00	14.649	14.403	0.246	0.568	4.32	-0.208	2.49		1.00	49.0
12/11/2012	9:02:00	14.649	14.404	0.245	0.565	4.32	-0.205	2.46		1.00	49.5
12/11/2012	9:17:00	14.651	14.412	0.239	0.551	4.32	-0.191	2.30		1.00	50.0
12/11/2012	9:32:00	14.655	14.418	0.237	0.547	4.32	-0.187	2.24		1.00	50.5
12/11/2012	9:47:00	14.659	14.423	0.236	0.544	4.32	-0.184	2.21		1.00	51.0
12/11/2012	10:02:00	14.671	14.424	0.247	0.570	4.32	-0.210	2.52		1.00	51.5
12/11/2012	10:17:00	14.676	14.431	0.245	0.565	4.32	-0.205	2.46		1.00	52.0
12/11/2012	10:32:00	14.673	14.429	0.244	0.563	4.32	-0.203	2.43		1.00	52.5
12/11/2012	10:47:00	14.673	14.429	0.244	0.563	4.32	-0.203	2.43		1.00	53.0
12/11/2012	11:02:00	14.675	14.424	0.251	0.579	4.32	-0.219	2.63		1.00	53.5
12/11/2012	11:17:00	14.669	14.423	0.246	0.568	4.32	-0.208	2.49		1.00	54.0
12/11/2012	11:32:00	14.665	14.419	0.246	0.568	4.32	-0.208	2.49		1.00	54.5
12/11/2012	11:47:00	14.668	14.420	0.248	0.572	4.32	-0.212	2.55		1.00	55.0
12/11/2012	12:02:00	14.666	14.421	0.245	0.565	4.32	-0.205	2.46		1.00	55.5
12/11/2012	12:17:00	14.671	14.428	0.243	0.561	4.32	-0.201	2.41		1.00	56.0
12/11/2012	12:32:00	14.666	14.417	0.249	0.574	4.32	-0.214	2.57		1.00	56.5
12/11/2012	12:47:00	14.661	14.417	0.244	0.563	4.32	-0.203	2.43		1.00	57.0
12/11/2012	13:02:00	14.667	14.422	0.245	0.565	4.32	-0.205	2.46		1.00	57.5
12/11/2012	13:17:00	14.663	14.418	0.245	0.565	4.32	-0.205	2.46		1.00	58.0
12/11/2012	13:32:00	14.667	14.423	0.244	0.563	4.32	-0.203	2.43		1.00	58.5
12/11/2012	13:47:00	14.666	14.430	0.236	0.544	4.32	-0.184	2.21		1.00	59.0
12/11/2012	14:02:00	14.669	14.426	0.243	0.561	4.32	-0.201	2.41		1.00	59.5
12/11/2012	14:17:00	14.671	14.429	0.242	0.558	4.32	-0.198	2.38		1.00	60.0
12/11/2012	14:32:00	14.670	14.429	0.241	0.556	4.32	-0.196	2.35		1.00	60.5
12/11/2012	14:47:00	14.673	14.432	0.241	0.556	4.32	-0.196	2.35		1.00	61.0
12/11/2012	15:02:00	14.672	14.426	0.246	0.568	4.32	-0.208	2.49		1.00	61.5
12/11/2012	15:17:00	14.675	14.425	0.250	0.577	4.32	-0.217	2.60		1.00	62.0
12/11/2012	15:32:00	14.675	14.432	0.243	0.561	4.32	-0.201	2.41		1.00	62.5
12/11/2012	15:47:00	14.684	14.441	0.243	0.561	4.32	-0.201	2.41		1.00	63.0
12/11/2012	16:02:00	14.687	14.449	0.238	0.549	4.32	-0.189	2.27		1.00	63.5
12/11/2012	16:17:00	14.688	14.445	0.243	0.561	4.32	-0.201	2.41		1.00	64.0
12/11/2012	16:32:00	14.689	14.451	0.238	0.549	4.32	-0.189	2.27		1.00	64.5
12/11/2012	16:47:00	14.694	14.454	0.240	0.554	4.32	-0.194	2.32		1.00	65.0
12/11/2012	17:02:00	14.699	14.451	0.248	0.572	4.32	-0.212	2.55		1.00	65.5
12/11/2012	17:17:00	14.700	14.463	0.237	0.547	4.32	-0.187	2.24		1.00	66.0
12/11/2012	17:32:00	14.703	14.462	0.241	0.556	4.32	-0.196	2.35		1.00	66.5
12/11/2012	17:47:00	14.701	14.459	0.242	0.558	4.32	-0.198	2.38		1.00	67.0
12/11/2012	18:02:00	14.703	14.468	0.235	0.542	4.32	-0.182	2.19		1.00	67.5
12/11/2012	18:17:00	14.708	14.470	0.238	0.549	4.32	-0.189	2.27		1.00	68.0
12/11/2012	18:32:00	14.709	14.475	0.234	0.540	4.32	-0.180	2.16		1.00	68.5
12/11/2012	18:47:00	14.716	14.473	0.243	0.561	4.32	-0.201	2.41		1.00	69.0
12/11/2012	19:02:00	14.722	14.474	0.248	0.572	4.32	-0.212	2.55		1.00	69.5
12/11/2012	19:17:00	14.718	14.482	0.236	0.544	4.32	-0.184	2.21		1.00	70.0
12/11/2012	19:32:00	14.720	14.488	0.232	0.535	4.32	-0.175	2.10		1.00	70.5
12/11/2012	19:47:00	14.723	14.492	0.231	0.533	4.32	-0.173	2.08		1.00	71.0
12/11/2012	20:02:00	14.721	14.481	0.240	0.554	4.32	-0.194	2.32		1.00	71.5
12/11/2012	20:17:00	14.722	14.487	0.235	0.542	4.32	-0.182	2.19		1.00	72.0
12/11/2012	20:32:00	14.725	14.488	0.237	0.547	4.32	-0.187	2.24		1.00	72.5
12/11/2012	20:47:00	14.726	14.493	0.233	0.538	4.32	-0.178	2.13		1.00	73.0
12/11/2012	21:02:00	14.727	14.494	0.233	0.538	4.32	-0.178	2.13		1.00	73.5
12/11/2012	21:17:00	14.728	14.504	0.224	0.517	4.32	-0.157	1.88		1.00	74.0
12/11/2012	21:32:00	14.738	14.502	0.236	0.544	4.32	-0.184	2.21		1.00	74.5
12/11/2012	21:47:00	14.736	14.498	0.238	0.549	4.32	-0.189	2.27		1.00	75.0
12/11/2012	22:02:00	14.735	14.498	0.237	0.547	4.32	-0.187	2.24		1.00	75.5
12/11/2012	22:17:00	14.741	14.496	0.245	0.565	4.32	-0.205	2.46		1.00	76.0
12/11/2012	22:32:00	14.739	14.506	0.233	0.538	4.32	-0.178	2.13		1.00	76.5
12/11/2012	22:47:00	14.740	14.497	0.243	0.561	4.32	-0.201	2.41		1.00	77.0

12/11/2012	23:02:00	14.747	14.510	0.237	0.547	4.32	-0.187	2.24		1.00	77.5
12/11/2012	23:17:00	14.750	14.518	0.232	0.535	4.32	-0.175	2.10		1.00	78.0
12/11/2012	23:32:00	14.752	14.520	0.232	0.535	4.32	-0.175	2.10		1.00	78.5
12/11/2012	23:47:00	14.755	14.520	0.235	0.542	4.32	-0.182	2.19		1.00	79.0
12/12/2012	0:02:00	14.754	14.525	0.229	0.528	4.32	-0.168	2.02		1.00	79.5
12/12/2012	0:17:00	14.752	14.508	0.244	0.563	4.32	-0.203	2.43		1.00	80.0
12/12/2012	0:32:00	14.749	14.513	0.236	0.544	4.32	-0.184	2.21		1.00	80.5
12/12/2012	0:47:00	14.742	14.511	0.231	0.533	4.32	-0.173	2.08		1.00	81.0
12/12/2012	1:02:00	14.749	14.509	0.240	0.554	4.32	-0.194	2.32		1.00	81.5
12/12/2012	1:17:00	14.751	14.519	0.232	0.535	4.32	-0.175	2.10		1.00	82.0
12/12/2012	1:32:00	14.755	14.519	0.236	0.544	4.32	-0.184	2.21		1.00	82.5
12/12/2012	1:47:00	14.753	14.525	0.228	0.526	4.32	-0.166	1.99		1.00	83.0
12/12/2012	2:02:00	14.756	14.529	0.227	0.524	4.32	-0.164	1.96		1.00	83.5
12/12/2012	2:17:00	14.757	14.527	0.230	0.531	4.32	-0.171	2.05		1.00	84.0
12/12/2012	2:32:00	14.757	14.526	0.231	0.533	4.32	-0.173	2.08		1.00	84.5
12/12/2012	2:47:00	14.757	14.527	0.230	0.531	4.32	-0.171	2.05		1.00	85.0
12/12/2012	3:02:00	14.751	14.523	0.228	0.526	4.32	-0.166	1.99		1.00	85.5
12/12/2012	3:17:00	14.760	14.527	0.233	0.538	4.32	-0.178	2.13		1.00	86.0
12/12/2012	3:32:00	14.764	14.528	0.236	0.544	4.32	-0.184	2.21		1.00	86.5
12/12/2012	3:47:00	14.760	14.534	0.226	0.521	4.32	-0.161	1.94		1.00	87.0
12/12/2012	4:02:00	14.762	14.535	0.227	0.524	4.32	-0.164	1.96		1.00	87.5
12/12/2012	4:17:00	14.765	14.537	0.228	0.526	4.32	-0.166	1.99		1.00	88.0
12/12/2012	4:32:00	14.769	14.532	0.237	0.547	4.32	-0.187	2.24		1.00	88.5
12/12/2012	4:47:00	14.765	14.537	0.228	0.526	4.32	-0.166	1.99		1.00	89.0
12/12/2012	5:02:00	14.765	14.541	0.224	0.517	4.32	-0.157	1.88		1.00	89.5
12/12/2012	5:17:00	14.771	14.541	0.230	0.531	4.32	-0.171	2.05		1.00	90.0
12/12/2012	5:32:00	14.775	14.546	0.229	0.528	4.32	-0.168	2.02		1.00	90.5
12/12/2012	5:47:00	14.775	14.546	0.229	0.528	4.32	-0.168	2.02		1.00	91.0
12/12/2012	6:02:00	14.776	14.542	0.234	0.540	4.32	-0.180	2.16		1.00	91.5
12/12/2012	6:17:00	14.772	14.545	0.227	0.524	4.32	-0.164	1.96		1.00	92.0
12/12/2012	6:32:00	14.777	14.548	0.229	0.528	4.32	-0.168	2.02		1.00	92.5
12/12/2012	6:47:00	14.776	14.546	0.230	0.531	4.32	-0.171	2.05		1.00	93.0
12/12/2012	7:02:00	14.784	14.550	0.234	0.540	4.32	-0.180	2.16		1.00	93.5
12/12/2012	7:17:00	14.787	14.551	0.236	0.544	4.32	-0.184	2.21		1.00	94.0
12/12/2012	7:32:00	14.786	14.556	0.230	0.531	4.32	-0.171	2.05		1.00	94.5
12/12/2012	7:47:00	14.789	14.569	0.220	0.508	4.32	-0.148	1.77		1.00	95.0
12/12/2012	8:02:00	14.796	14.567	0.229	0.528	4.32	-0.168	2.02		1.00	95.5
12/12/2012	8:17:00	14.800	14.566	0.234	0.540	4.32	-0.180	2.16		1.00	96.0
12/12/2012	8:32:00	14.801	14.569	0.232	0.535	4.32	-0.175	2.10		1.00	96.5
12/12/2012	8:47:00	14.801	14.568	0.233	0.538	4.32	-0.178	2.13		1.00	97.0
12/12/2012	9:02:00	14.805	14.566	0.239	0.551	4.32	-0.191	2.30		1.00	97.5
12/12/2012	9:17:00	14.804	14.570	0.234	0.540	4.32	-0.180	2.16		1.00	98.0
12/12/2012	9:32:00	14.807	14.571	0.236	0.544	4.32	-0.184	2.21		1.00	98.5
12/12/2012	9:47:00	14.799	14.576	0.223	0.514	4.32	-0.154	1.85		1.00	99.0
12/12/2012	10:02:00	14.799	14.573	0.226	0.521	4.32	-0.161	1.94		1.00	99.5
12/12/2012	10:17:00	14.805	14.571	0.234	0.540	4.32	-0.180	2.16		1.00	100.0
12/12/2012	10:32:00	14.806	14.583	0.223	0.514	4.32	-0.154	1.85		1.00	100.5
12/12/2012	10:47:00	14.807	14.580	0.227	0.524	4.32	-0.164	1.96		1.00	101.0
12/12/2012	11:02:00	14.806	14.578	0.228	0.526	4.32	-0.166	1.99		1.00	101.5
12/12/2012	11:17:00	14.800	14.575	0.225	0.519	4.32	-0.159	1.91		1.00	102.0
12/12/2012	11:32:00	14.807	14.578	0.229	0.528	4.32	-0.168	2.02		1.00	102.5
12/12/2012	11:47:00	14.806	14.579	0.227	0.524	4.32	-0.164	1.96		1.00	103.0
12/12/2012	12:02:00	14.805	14.571	0.234	0.540	4.32	-0.180	2.16		1.00	103.5
12/12/2012	12:17:00	14.801	14.580	0.221	0.510	4.32	-0.150	1.80		1.00	104.0
12/12/2012	12:32:00	14.798	14.564	0.234	0.540	4.32	-0.180	2.16		1.00	104.5
12/12/2012	12:47:00	14.793	14.572	0.221	0.510	4.32	-0.150	1.80		1.00	105.0
12/12/2012	13:02:00	14.793	14.574	0.219	0.505	4.32	-0.145	1.74		1.00	105.5
12/12/2012	13:17:00	14.796	14.573	0.223	0.514	4.32	-0.154	1.85		1.00	106.0
12/12/2012	13:32:00	14.795	14.565	0.230	0.531	4.32	-0.171	2.05		1.00	106.5
12/12/2012	13:47:00	14.786	14.561	0.225	0.519	4.32	-0.159	1.91		1.00	107.0
12/12/2012	14:02:00	14.793	14.561	0.232	0.535	4.32	-0.175	2.10		1.00	107.5
12/12/2012	14:17:00	14.790	14.562	0.228	0.526	4.32	-0.166	1.99		1.00	108.0
12/12/2012	14:32:00	14.794	14.570	0.224	0.517	4.32	-0.157	1.88		1.00	108.5
12/12/2012	14:47:00	14.795	14.562	0.233	0.538	4.32	-0.178	2.13		1.00	109.0
12/12/2012	15:02:00	14.794	14.569	0.225	0.519	4.32	-0.159	1.91		1.00	109.5
12/12/2012	15:17:00	14.818	14.576	0.242	0.558	4.32	-0.198	2.38		1.00	110.0
12/12/2012	15:32:00	14.811	14.564	0.247	0.570	4.32	-0.210	2.52		1.00	110.5
12/12/2012	15:47:00	14.816	14.575	0.241	0.556	4.32	-0.196	2.35		1.00	111.0
12/12/2012	16:02:00	14.823	14.582	0.241	0.556	4.32	-0.196	2.35		1.00	111.5
12/12/2012	16:17:00	14.825	14.583	0.242	0.558	4.32	-0.198	2.38		1.00	112.0
12/12/2012	16:32:00	14.814	14.577	0.237	0.547	4.32	-0.187	2.24		1.00	112.5
12/12/2012	16:47:00	14.813	14.568	0.245	0.565	4.32	-0.205	2.46		1.00	113.0
12/12/2012	17:02:00	14.817	14.570	0.247	0.570	4.32	-0.210	2.52		1.00	113.5
12/12/2012	17:17:00	14.818	14.579	0.239	0.551	4.32	-0.191	2.30		1.00	114.0
12/12/2012	17:32:00	14.815	14.573	0.242	0.558	4.32	-0.198	2.38		1.00	114.5
12/12/2012	17:47:00	14.823	14.575	0.248	0.572	4.32	-0.212	2.55		1.00	115.0
12/12/2012	18:02:00	14.833	14.583	0.250	0.577	4.32	-0.217	2.60		1.00	115.5
12/12/2012	18:17:00	14.837	14.588	0.249	0.574	4.32	-0.214	2.57		1.00	116.0
12/12/2012	18:32:00	14.844	14.593	0.251	0.579	4.32	-0.219	2.63		1.00	116.5
12/12/2012	18:47:00	14.851	14.593	0.258	0.595	4.32	-0.235	2.82		1.00	117.0
12/12/2012	19:02:00	14.854	14.590	0.264	0.609	4.32	-0.249	2.99		1.00	117.5
12/12/2012	19:17:00	14.855	14.597	0.258	0.595	4.32	-0.235	2.82		1.00	118.0
12/12/2012	19:32:00	14.855	14.582	0.273	0.630	4.32	-0.270	3.24		1.00	118.5
12/12/2012	19:47:00	14.849	14.575	0.274	0.632	4.32	-0.272	3.27		1.00	119.0
12/12/2012	20:02:00	14.841	14.579	0.262	0.604	4.32	-0.244	2.93		1.00	119.5
12/12/2012	20:17:00	14.845	14.587	0.258	0.595	4.32	-0.235	2.82		1.00	120.0
12/12/2012	20:32:00	14.855	14.588	0.267	0.616	4.32	-0.256	3.07		1.00	120.5
12/12/2012	20:47:00	14.853	14.586	0.267	0.616	4.32	-0.256	3.07		1.00	121.0
12/12/2012	21:02:00	14.850	14.584	0.266	0.614	4.32	-0.254	3.04		1.00	121.5
12/12/2012	21:17:00	14.851	14.585	0.266	0.614	4.32	-0.254	3.04		1.00	122.0
12/12/2012	21:32:00	14.855	14.584	0.271	0.625	4.32	-0.265	3.18		1.00	122.5
12/12/2012	21:47:00	14.854	14.583	0.271	0.625	4.32	-0.265	3.18		1.00	123.0
12/12/2012	22:02:00	14.858	14.583	0.275	0.634	4.32	-0.274	3.29		1.00	123.5
12/12/2012	22:17:00	14.863	14.583	0.280	0.646	4.32	-0.286	3.43		1.00	124.0
12/12/2012	22:32:00	14.861	14.585	0.276	0.637	4.32	-0.277	3.32		1.00	124.5
12/12/2012	22:47:00	14.860	14.582	0.278	0.641	4.32	-0.281	3.38		1.00	125.0
12/12/2012	23:02:00	14.862	14.578	0.284	0.655	4.32	-0.295	3.54		1.00	125.5
12/12/2012	23:17:00	14.861	14.591	0.270	0.623	4.32	-0.263	3.15		1.00	126.0
12/12/2012	23:32:00	14.870	14.594	0.276	0.637	4.32	-0.277	3.32		1.00	126.5
12/12/2012	23:47:00	14.869	14.591	0.278	0.641	4.32	-0.281	3.38		1.00	127.0
12/13/2012	0:02:00	14.862	14.594	0.268	0.618	4.32	-0.258	3.10		1.00	127.5
12/13/2012	0:17:00	14.863	14.602	0.261	0.602	4.32	-0.242	2.91		1.00	128.0
12/13/2012	0:32:00	14.872	14.601	0.271	0.625	4.32	-0.265	3.18		1.00	128.5
12/13/2012	0:47:00	14.870	14.606	0.264	0.609	4.32	-0.249	2.99		1.00	129.0
12/13/2012	1:02:00	14.880	14.603	0.277	0.639	4.32	-0.279	3.35		1.00	129.5
12/13/2012	1:17:00	14.875	14.602	0.273	0.630	4.32	-0.270	3.24		1.00	130.0
12/13/2012	1:32:00	14.871	14.597	0.274	0.632	4.32	-0.272	3.27		1.00	130.5
12/13/2012	1:47:00	14.868	14.587	0.281	0.648	4.32	-0.288	3.46		1.00	131.0
12/13/2012	2:02:00	14.861	14.585	0.276	0.637	4.32	-0.277	3.32		1.00	131.5
12/13/2012	2:17:00	14.864	14.579	0.285	0.657	4.32	-0.297	3.57		1.00	132.0
12/13/2012	2:32:00	14.860	14.567	0.293	0.676	4.32	-0.316	3.79		1.00	132.5
12/13/2012	2:47:00	14.871	14.569	0.302	0.697	4.32	-0.337	4.04		1.00	133.0
12/13/2012	3:02:00	14.891	14.570	0.321	0.741	4.32	-0.381	4.57		1.00	133.5
12/13/2012	3:17:00	14.895	14.568	0.327	0.754	4.32	-0.394	4.73		1.00	134.0
12/13/2012	3:32:00	14.894	14.584	0.310	0.715	4.32	-0.355	4.26		1.00	134.5
12/13/2012	3:47:00	14.903	14.579	0.324	0.747	4.32	-0.387	4.65		1.00	135.0
12/13/2012	4:02:00	14.909	14.586	0.323	0.745	4.32	-0.385	4.62		1.00	135.5
12/13/2012	4:17:00	14.909	14.587	0.322	0.743	4.32	-0.383	4.59		1.00	136.0
12/13/2012	4:32:00	14.900	14.594	0.306	0.706	4.32	-0.346	4.15		1.00	136.5
12/13/2012	4:47:00	14.899	14.600	0.299	0.690	4.32	-0.330	3.96		1.00	137.0
12/13/2012	5:02:00	14.902	14.597	0.305	0.704	4.32	-0.344	4.12		1.00	137.5
12/13/2012	5:17:00	14.897	14.601	0.296	0.683	4.32	-0.323	3.87		1.00	138.0
12/13/2012	5:32:00	14.901	14.597	0.304	0.701	4.32	-0.341	4.10		1.00	138.5
12/13/2012	5:47:00	14.897	14.602	0.295	0.681	4.32	-0.321	3.85		1.00	139.0
12/13/2012	6:02:00	14.897	14.610	0.287	0.662	4.32	-0.302	3.63		1.00	139.5
12/13/2012	6:17:00	14.910	14.603	0.307	0.708	4.32	-0.348	4.18		1.00	140.0
12/13/2012	6:32:00	14.904	14.612	0.292	0.674	4.32	-0.314	3.76		1.00	140.5
12/13/2012	6:47:00	14.902	14.611	0.291	0.671	4.32	-0.311	3.74		1.00	141.0
12/13/2012	7:02:00	14.908	14.620	0.288	0.664	4.32	-0.304	3.65		1.00	141.5
12/13/2012	7:17:00	14.908	14.619	0.289	0.667	4.32	-0.307	3.68		1.00	142.0
12/13/2012	7:32:00	14.898	14.623	0.275	0.634	4.32	-0.274	3.29		1.00	142.5
12/13/2012	7:47:00	14.907	14.624	0.283	0.653	4.32	-0.293	3.51		1.00	143.0
12/13/2012	8:02:00	14.902	14.624	0.278	0.641	4.32	-0.281	3.38		1.00	143.5

12/13/2012	8:17:00	14.907	14.632	0.275	0.634	4.32	-0.274	3.29		1.00	144.0
12/13/2012	8:32:00	14.909	14.628	0.281	0.648	4.32	-0.288	3.46		1.00	144.5
12/13/2012	8:47:00	14.903	14.631	0.272	0.628	4.32	-0.268	3.21		1.00	145.0
12/13/2012	9:02:00	14.910	14.635	0.275	0.634	4.32	-0.274	3.29		1.00	145.5
12/13/2012	9:17:00	14.903	14.635	0.268	0.618	4.32	-0.258	3.10		1.00	146.0
12/13/2012	9:32:00	14.902	14.639	0.263	0.607	4.32	-0.247	2.96		1.00	146.5
12/13/2012	9:47:00	14.900	14.636	0.264	0.609	4.32	-0.249	2.99		1.00	147.0
12/13/2012	10:02:00	14.903	14.642	0.261	0.602	4.32	-0.242	2.91		1.00	147.5
12/13/2012	10:17:00	14.899	14.637	0.262	0.604	4.32	-0.244	2.93		1.00	148.0
12/13/2012	10:32:00	14.896	14.636	0.260	0.600	4.32	-0.240	2.88		1.00	148.5
12/13/2012	10:47:00	14.904	14.638	0.266	0.614	4.32	-0.254	3.04		1.00	149.0
12/13/2012	11:02:00	14.901	14.640	0.261	0.602	4.32	-0.242	2.91		1.00	149.5
12/13/2012	11:17:00	14.896	14.635	0.261	0.602	4.32	-0.242	2.91		1.00	150.0
12/13/2012	11:32:00	14.894	14.636	0.258	0.595	4.32	-0.235	2.82		1.00	150.5
12/13/2012	11:47:00	14.895	14.630	0.265	0.611	4.32	-0.251	3.02		1.00	151.0
12/13/2012	12:02:00	14.888	14.624	0.264	0.609	4.32	-0.249	2.99		1.00	151.5
12/13/2012	12:17:00	14.887	14.622	0.265	0.611	4.32	-0.251	3.02		1.00	152.0
12/13/2012	12:32:00	14.881	14.619	0.262	0.604	4.32	-0.244	2.93		1.00	152.5
12/13/2012	12:47:00	14.884	14.620	0.264	0.609	4.32	-0.249	2.99		1.00	153.0
12/13/2012	13:02:00	14.873	14.615	0.258	0.595	4.32	-0.235	2.82		1.00	153.5
12/13/2012	13:17:00	14.873	14.610	0.263	0.607	4.32	-0.247	2.96		1.00	154.0
12/13/2012	13:32:00	14.867	14.612	0.255	0.588	4.32	-0.228	2.74		1.00	154.5
12/13/2012	13:47:00	14.868	14.606	0.262	0.604	4.32	-0.244	2.93		1.00	155.0
12/13/2012	14:02:00	14.860	14.612	0.248	0.572	4.32	-0.212	2.55		1.00	155.5
12/13/2012	14:17:00	14.860	14.602	0.258	0.595	4.32	-0.235	2.82		1.00	156.0
12/13/2012	14:32:00	14.859	14.603	0.256	0.591	4.32	-0.231	2.77		1.00	156.5
12/13/2012	14:47:00	14.859	14.604	0.255	0.588	4.32	-0.228	2.74		1.00	157.0
12/13/2012	15:02:00	14.857	14.604	0.253	0.584	4.32	-0.224	2.68		1.00	157.5
12/13/2012	15:17:00	14.860	14.606	0.254	0.586	4.32	-0.226	2.71		1.00	158.0
12/13/2012	15:32:00	14.854	14.603	0.251	0.579	4.32	-0.219	2.63		1.00	158.5
12/13/2012	15:47:00	14.855	14.603	0.252	0.581	4.32	-0.221	2.66		1.00	159.0
12/13/2012	16:02:00	14.854	14.603	0.251	0.579	4.32	-0.219	2.63		1.00	159.5
12/13/2012	16:17:00	14.852	14.603	0.249	0.574	4.32	-0.214	2.57		1.00	160.0
12/13/2012	16:32:00	14.853	14.602	0.251	0.579	4.32	-0.219	2.63		1.00	160.5
12/13/2012	16:47:00	14.857	14.614	0.243	0.561	4.32	-0.201	2.41		1.00	161.0
12/13/2012	17:02:00	14.858	14.618	0.240	0.554	4.32	-0.194	2.32		1.00	161.5
12/13/2012	17:17:00	14.860	14.608	0.252	0.581	4.32	-0.221	2.66		1.00	162.0
12/13/2012	17:32:00	14.858	14.608	0.250	0.577	4.32	-0.217	2.60		1.00	162.5
12/13/2012	17:47:00	14.860	14.610	0.250	0.577	4.32	-0.217	2.60		1.00	163.0
12/13/2012	18:02:00	14.859	14.613	0.246	0.568	4.32	-0.208	2.49		1.00	163.5
12/13/2012	18:17:00	14.858	14.613	0.245	0.565	4.32	-0.205	2.46		1.00	164.0
12/13/2012	18:32:00	14.859	14.616	0.243	0.561	4.32	-0.201	2.41		1.00	164.5
12/13/2012	18:47:00	14.860	14.618	0.242	0.558	4.32	-0.198	2.38		1.00	165.0
12/13/2012	19:02:00	14.866	14.621	0.245	0.565	4.32	-0.205	2.46		1.00	165.5
12/13/2012	19:17:00	14.860	14.623	0.237	0.547	4.32	-0.187	2.24		1.00	166.0
12/13/2012	19:32:00	14.866	14.623	0.243	0.561	4.32	-0.201	2.41		1.00	166.5
12/13/2012	19:47:00	14.860	14.624	0.236	0.544	4.32	-0.184	2.21		1.00	167.0
12/13/2012	20:02:00	14.861	14.622	0.239	0.551	4.32	-0.191	2.30		1.00	167.5
12/13/2012	20:17:00	14.866	14.626	0.240	0.554	4.32	-0.194	2.32		1.00	168.0
12/13/2012	20:32:00	14.863	14.620	0.243	0.561	4.32	-0.201	2.41		1.00	168.5
12/13/2012	20:47:00	14.858	14.619	0.239	0.551	4.32	-0.191	2.30		1.00	169.0
12/13/2012	21:02:00	14.863	14.625	0.238	0.549	4.32	-0.189	2.27		1.00	169.5
12/13/2012	21:17:00	14.866	14.620	0.246	0.568	4.32	-0.208	2.49		1.00	170.0
12/13/2012	21:32:00	14.860	14.623	0.237	0.547	4.32	-0.187	2.24		1.00	170.5
12/13/2012	21:47:00	14.864	14.625	0.239	0.551	4.32	-0.191	2.30		1.00	171.0
12/13/2012	22:02:00	14.863	14.632	0.231	0.533	4.32	-0.173	2.08		1.00	171.5
12/13/2012	22:17:00	14.872	14.634	0.238	0.549	4.32	-0.189	2.27		1.00	172.0
12/13/2012	22:32:00	14.869	14.627	0.242	0.558	4.32	-0.198	2.38		1.00	172.5
12/13/2012	22:47:00	14.871	14.632	0.239	0.551	4.32	-0.191	2.30		1.00	173.0
12/13/2012	23:02:00	14.873	14.638	0.235	0.542	4.32	-0.182	2.19		1.00	173.5
12/13/2012	23:17:00	14.874	14.636	0.238	0.549	4.32	-0.189	2.27		1.00	174.0
12/13/2012	23:32:00	14.873	14.629	0.244	0.563	4.32	-0.203	2.43		1.00	174.5
12/13/2012	23:47:00	14.868	14.631	0.237	0.547	4.32	-0.187	2.24		1.00	175.0
12/14/2012	0:02:00	14.867	14.628	0.239	0.551	4.32	-0.191	2.30		1.00	175.5
12/14/2012	0:17:00	14.864	14.624	0.240	0.554	4.32	-0.194	2.32		1.00	176.0
12/14/2012	0:32:00	14.866	14.626	0.240	0.554	4.32	-0.194	2.32		1.00	176.5
12/14/2012	0:47:00	14.869	14.628	0.241	0.556	4.32	-0.196	2.35		1.00	177.0
12/14/2012	1:02:00	14.861	14.623	0.238	0.549	4.32	-0.189	2.27		1.00	177.5
12/14/2012	1:17:00	14.867	14.630	0.237	0.547	4.32	-0.187	2.24		1.00	178.0
12/14/2012	1:32:00	14.866	14.626	0.240	0.554	4.32	-0.194	2.32		1.00	178.5
12/14/2012	1:47:00	14.865	14.626	0.239	0.551	4.32	-0.191	2.30		1.00	179.0
12/14/2012	2:02:00	14.867	14.624	0.243	0.561	4.32	-0.201	2.41		1.00	179.5
12/14/2012	2:17:00	14.869	14.622	0.247	0.570	4.32	-0.210	2.52		1.00	180.0
12/14/2012	2:32:00	14.862	14.625	0.237	0.547	4.32	-0.187	2.24		1.00	180.5
12/14/2012	2:47:00	14.864	14.626	0.238	0.549	4.32	-0.189	2.27		1.00	181.0
12/14/2012	3:02:00	14.860	14.624	0.236	0.544	4.32	-0.184	2.21		1.00	181.5
12/14/2012	3:17:00	14.859	14.619	0.240	0.554	4.32	-0.194	2.32		1.00	182.0
12/14/2012	3:32:00	14.864	14.620	0.244	0.563	4.32	-0.203	2.43		1.00	182.5
12/14/2012	3:47:00	14.857	14.624	0.233	0.538	4.32	-0.178	2.13		1.00	183.0
12/14/2012	4:02:00	14.867	14.627	0.240	0.554	4.32	-0.194	2.32		1.00	183.5
12/14/2012	4:17:00	14.867	14.623	0.244	0.563	4.32	-0.203	2.43		1.00	184.0
12/14/2012	4:32:00	14.859	14.624	0.235	0.542	4.32	-0.182	2.19		1.00	184.5
12/14/2012	4:47:00	14.863	14.622	0.241	0.556	4.32	-0.196	2.35		1.00	185.0
12/14/2012	5:02:00	14.862	14.624	0.238	0.549	4.32	-0.189	2.27		1.00	185.5
12/14/2012	5:17:00	14.857	14.627	0.230	0.531	4.32	-0.171	2.05		1.00	186.0
12/14/2012	5:32:00	14.860	14.627	0.233	0.538	4.32	-0.178	2.13		1.00	186.5
12/14/2012	5:47:00	14.858	14.626	0.232	0.535	4.32	-0.175	2.10		1.00	187.0
12/14/2012	6:02:00	14.864	14.632	0.232	0.535	4.32	-0.175	2.10		1.00	187.5
12/14/2012	6:17:00	14.868	14.639	0.229	0.528	4.32	-0.168	2.02			
12/14/2012	6:32:00	14.882	14.643	0.239	0.551	4.32	-0.191	2.30			
12/14/2012	6:47:00	14.882	14.640	0.242	0.558	4.32	-0.198	2.38			
12/14/2012	7:02:00	14.875	14.641	0.234	0.540	4.32	-0.180	2.16			
12/14/2012	7:17:00	14.880	14.641	0.239	0.551	4.32	-0.191	2.30			
12/14/2012	7:32:00	14.874	14.633	0.241	0.556	4.32	-0.196	2.35			
12/14/2012	7:47:00	14.869	14.634	0.235	0.542	4.32	-0.182	2.19			
12/14/2012	8:02:00	14.867	14.634	0.233	0.538	4.32	-0.178	2.13			
12/14/2012	8:17:00	14.866	14.637	0.229	0.528	4.32	-0.168	2.02			
12/14/2012	8:32:00	14.872	14.632	0.240	0.554	4.32	-0.194	2.32			
12/14/2012	8:47:00	14.875	14.637	0.238	0.549	4.32	-0.189	2.27			
12/14/2012	9:02:00	14.880	14.643	0.237	0.547	4.32	-0.187	2.24			
12/14/2012	9:17:00	14.878	14.642	0.236	0.544	4.32	-0.184	2.21			
12/14/2012	9:32:00	14.883	14.643	0.240	0.554	4.32	-0.194	2.32			
12/14/2012	9:47:00	14.888	14.647	0.241	0.556	4.32	-0.196	2.35			
12/14/2012	10:02:00	14.886	14.647	0.239	0.551	4.32	-0.191	2.30			
12/14/2012	10:17:00	14.881	14.644	0.237	0.547	4.32	-0.187	2.24			
12/14/2012	10:32:00	14.887	14.644	0.243	0.561	4.32	-0.201	2.41			
12/14/2012	10:47:00	14.887	14.635	0.252	0.581	4.32	-0.221	2.66			
12/14/2012	11:02:00	14.882	14.635	0.247	0.570	4.32	-0.210	2.52			
12/14/2012	11:17:00	14.883	14.644	0.239	0.551	4.32	-0.191	2.30			
12/14/2012	11:32:00	14.876	14.631	0.245	0.565	4.32	-0.205	2.46			
12/14/2012	11:47:00	14.874	14.625	0.249	0.574	4.32	-0.214	2.57			
12/14/2012	12:02:00	14.862	14.621	0.241	0.556	4.32	-0.196	2.35			
12/14/2012	12:17:00	14.862	14.616	0.246	0.568	4.32	-0.208	2.49			
12/14/2012	12:32:00	14.856	14.606	0.250	0.577	4.32	-0.217	2.60			
12/14/2012	12:47:00	14.855	14.605	0.250	0.577	4.32	-0.217	2.60			
12/14/2012	13:02:00	14.850	14.605	0.245	0.565	4.32	-0.205	2.46			
12/14/2012	13:17:00	14.836	14.596	0.240	0.554	4.32	-0.194	2.32			
12/14/2012	13:32:00	14.867	14.596	0.271	0.625	4.32	-0.265	3.18			
12/14/2012	13:47:00	14.862	14.594	0.268	0.618	4.32	-0.258	3.10			
12/14/2012	14:02:00	14.856	14.586	0.270	0.623	4.32	-0.263	3.15			
12/14/2012	14:17:00	14.854	14.581	0.273	0.630	4.32	-0.270	3.24			
12/14/2012	14:32:00	14.850	14.578	0.272	0.628	4.32	-0.268	3.21			
12/14/2012	14:47:00	14.843	14.575	0.268	0.618	4.32	-0.258	3.10			
12/14/2012	15:02:00	14.843	14.577	0.266	0.614	4.32	-0.254	3.04			
12/14/2012	15:17:00	14.843	14.572	0.271	0.625	4.32	-0.265	3.18			
12/14/2012	15:32:00	14.840	14.573	0.267	0.616	4.32	-0.256	3.07			
12/14/2012	15:47:00	14.835	14.572	0.263	0.607	4.32	-0.247	2.96			
12/14/2012	16:02:00	14.840	14.569	0.271	0.625	4.32	-0.265	3.18			
12/14/2012	16:17:00	14.832	14.567	0.265	0.611	4.32	-0.251	3.02			
12/14/2012	16:32:00	14.831	14.573	0.258	0.595	4.32	-0.235	2.82			
12/14/2012	16:47:00	14.836	14.568	0.268	0.618	4.32	-0.258	3.10			
12/14/2012	17:02:00	14.834	14.573	0.261	0.602	4.32	-0.242	2.91			
12/14/2012	17:17:00	14.839	14.568	0.271	0.625	4.32	-0.265	3.18			

12/14/2012	17:32:00	14.840	14.586	0.254	0.586	4.32	-0.226	2.71
12/14/2012	17:47:00	14.841	14.577	0.264	0.609	4.32	-0.249	2.99
12/14/2012	18:02:00	14.840	14.580	0.260	0.600	4.32	-0.240	2.88
12/14/2012	18:17:00	14.842	14.582	0.260	0.600	4.32	-0.240	2.88
12/14/2012	18:32:00	14.838	14.578	0.260	0.600	4.32	-0.240	2.88
12/14/2012	18:47:00	14.842	14.579	0.263	0.607	4.32	-0.247	2.96
12/14/2012	19:02:00	14.838	14.577	0.261	0.602	4.32	-0.242	2.91
12/14/2012	19:17:00	14.835	14.579	0.256	0.591	4.32	-0.231	2.77
12/14/2012	19:32:00	14.835	14.585	0.250	0.577	4.32	-0.217	2.60
12/14/2012	19:47:00	14.843	14.581	0.262	0.604	4.32	-0.244	2.93
12/14/2012	20:02:00	14.840	14.585	0.255	0.588	4.32	-0.228	2.74
12/14/2012	20:17:00	14.839	14.583	0.256	0.591	4.32	-0.231	2.77
12/14/2012	20:32:00	14.837	14.578	0.259	0.598	4.32	-0.238	2.85
12/14/2012	20:47:00	14.835	14.575	0.260	0.600	4.32	-0.240	2.88
12/14/2012	21:02:00	14.833	14.580	0.253	0.584	4.32	-0.224	2.68
12/14/2012	21:17:00	14.834	14.584	0.250	0.577	4.32	-0.217	2.60
12/14/2012	21:32:00	14.839	14.584	0.255	0.588	4.32	-0.228	2.74
12/14/2012	21:47:00	14.837	14.584	0.253	0.584	4.32	-0.224	2.68
12/14/2012	22:02:00	14.839	14.588	0.251	0.579	4.32	-0.219	2.63
12/14/2012	22:17:00	14.846	14.586	0.260	0.600	4.32	-0.240	2.88
12/14/2012	22:32:00	14.837	14.585	0.252	0.581	4.32	-0.221	2.66
12/14/2012	22:47:00	14.843	14.585	0.258	0.595	4.32	-0.235	2.82
12/14/2012	23:02:00	14.841	14.589	0.252	0.581	4.32	-0.221	2.66
12/14/2012	23:17:00	14.839	14.585	0.254	0.586	4.32	-0.226	2.71
12/14/2012	23:32:00	14.840	14.580	0.260	0.600	4.32	-0.240	2.88
12/14/2012	23:47:00	14.836	14.579	0.257	0.593	4.32	-0.233	2.79
12/15/2012	0:02:00	14.838	14.579	0.259	0.598	4.32	-0.238	2.85
12/15/2012	0:17:00	14.836	14.580	0.256	0.591	4.32	-0.231	2.77
12/15/2012	0:32:00	14.834	14.575	0.259	0.598	4.32	-0.238	2.85
12/15/2012	0:47:00	14.835	14.584	0.251	0.579	4.32	-0.219	2.63
12/15/2012	1:02:00	14.841	14.589	0.253	0.584	4.32	-0.224	2.68
12/15/2012	1:17:00	14.843	14.585	0.258	0.595	4.32	-0.235	2.82
12/15/2012	1:32:00	14.846	14.581	0.265	0.611	4.32	-0.251	3.02
12/15/2012	1:47:00	14.842	14.575	0.267	0.616	4.32	-0.256	3.07
12/15/2012	2:02:00	14.831	14.575	0.256	0.591	4.32	-0.231	2.77
12/15/2012	2:17:00	14.830	14.577	0.253	0.584	4.32	-0.224	2.68
12/15/2012	2:32:00	14.833	14.572	0.261	0.602	4.32	-0.242	2.91
12/15/2012	2:47:00	14.827	14.574	0.253	0.584	4.32	-0.224	2.68
12/15/2012	3:02:00	14.828	14.573	0.255	0.588	4.32	-0.228	2.74
12/15/2012	3:17:00	14.826	14.560	0.266	0.614	4.32	-0.254	3.04
12/15/2012	3:32:00	14.813	14.561	0.252	0.581	4.32	-0.221	2.66
12/15/2012	3:47:00	14.823	14.562	0.261	0.602	4.32	-0.242	2.91
12/15/2012	4:02:00	14.816	14.556	0.260	0.600	4.32	-0.240	2.88
12/15/2012	4:17:00	14.816	14.558	0.258	0.595	4.32	-0.235	2.82
12/15/2012	4:32:00	14.814	14.564	0.250	0.577	4.32	-0.217	2.60
12/15/2012	4:47:00	14.819	14.561	0.258	0.595	4.32	-0.235	2.82
12/15/2012	5:02:00	14.815	14.563	0.252	0.581	4.32	-0.221	2.66
12/15/2012	5:17:00	14.818	14.560	0.258	0.595	4.32	-0.235	2.82
12/15/2012	5:32:00	14.819	14.563	0.256	0.591	4.32	-0.231	2.77
12/15/2012	5:47:00	14.820	14.567	0.253	0.584	4.32	-0.224	2.68
12/15/2012	6:02:00	14.827	14.567	0.260	0.600	4.32	-0.240	2.88
12/15/2012	6:17:00	14.829	14.572	0.257	0.593	4.32	-0.233	2.79
12/15/2012	6:32:00	14.840	14.579	0.261	0.602	4.32	-0.242	2.91
12/15/2012	6:47:00	14.836	14.579	0.257	0.593	4.32	-0.233	2.79
12/15/2012	7:02:00	14.841	14.578	0.263	0.607	4.32	-0.247	2.96
12/15/2012	7:17:00	14.836	14.577	0.259	0.598	4.32	-0.238	2.85
12/15/2012	7:32:00	14.834	14.577	0.257	0.593	4.32	-0.233	2.79
12/15/2012	7:47:00	14.834	14.570	0.264	0.609	4.32	-0.249	2.99
12/15/2012	8:02:00	14.827	14.574	0.253	0.584	4.32	-0.224	2.68
12/15/2012	8:17:00	14.833	14.574	0.259	0.598	4.32	-0.238	2.85
12/15/2012	8:32:00	14.841	14.576	0.265	0.611	4.32	-0.251	3.02
12/15/2012	8:47:00	14.839	14.575	0.264	0.609	4.32	-0.249	2.99
12/15/2012	9:02:00	14.840	14.585	0.255	0.588	4.32	-0.228	2.74
12/15/2012	9:17:00	14.847	14.582	0.265	0.611	4.32	-0.251	3.02
12/15/2012	9:32:00	14.843	14.583	0.260	0.600	4.32	-0.240	2.88
12/15/2012	9:47:00	14.847	14.583	0.264	0.609	4.32	-0.249	2.99
12/15/2012	10:02:00	14.846	14.582	0.264	0.609	4.32	-0.249	2.99
12/15/2012	10:17:00	14.847	14.578	0.269	0.621	4.32	-0.261	3.13
12/15/2012	10:32:00	14.838	14.580	0.258	0.595	4.32	-0.235	2.82
12/15/2012	10:47:00	14.845	14.578	0.267	0.616	4.32	-0.256	3.07
12/15/2012	11:02:00	14.836	14.573	0.263	0.607	4.32	-0.247	2.96
12/15/2012	11:17:00	14.836	14.578	0.258	0.595	4.32	-0.235	2.82
12/15/2012	11:32:00	14.840	14.567	0.273	0.630	4.32	-0.270	3.24
12/15/2012	11:47:00	14.829	14.563	0.266	0.614	4.32	-0.254	3.04
12/15/2012	12:02:00	14.828	14.555	0.273	0.630	4.32	-0.270	3.24
12/15/2012	12:17:00	14.819	14.559	0.260	0.600	4.32	-0.240	2.88
12/15/2012	12:32:00	14.814	14.549	0.265	0.611	4.32	-0.251	3.02
12/15/2012	12:47:00	14.808	14.548	0.260	0.600	4.32	-0.240	2.88
12/15/2012	13:02:00	14.807	14.545	0.262	0.604	4.32	-0.244	2.93
12/15/2012	13:17:00	14.804	14.541	0.263	0.607	4.32	-0.247	2.96
12/15/2012	13:32:00	14.803	14.538	0.265	0.611	4.32	-0.251	3.02
12/15/2012	13:47:00	14.800	14.538	0.262	0.604	4.32	-0.244	2.93
12/15/2012	14:02:00	14.801	14.529	0.272	0.628	4.32	-0.268	3.21
12/15/2012	14:17:00	14.804	14.529	0.275	0.634	4.32	-0.274	3.29
12/15/2012	14:32:00	14.797	14.533	0.264	0.609	4.32	-0.249	2.99
12/15/2012	14:47:00	14.791	14.527	0.264	0.609	4.32	-0.249	2.99
12/15/2012	15:02:00	14.787	14.526	0.261	0.602	4.32	-0.242	2.91
12/15/2012	15:17:00	14.791	14.530	0.261	0.602	4.32	-0.242	2.91
12/15/2012	15:32:00	14.792	14.523	0.269	0.621	4.32	-0.261	3.13
12/15/2012	15:47:00	14.789	14.526	0.263	0.607	4.32	-0.247	2.96
12/15/2012	16:02:00	14.792	14.529	0.263	0.607	4.32	-0.247	2.96
12/15/2012	16:17:00	14.786	14.516	0.270	0.623	4.32	-0.263	3.15
12/15/2012	16:32:00	14.787	14.525	0.262	0.604	4.32	-0.244	2.93
12/15/2012	16:47:00	14.791	14.522	0.269	0.621	4.32	-0.261	3.13
12/15/2012	17:02:00	14.783	14.522	0.261	0.602	4.32	-0.242	2.91
12/15/2012	17:17:00	14.781	14.514	0.267	0.616	4.32	-0.256	3.07
12/15/2012	17:32:00	14.789	14.523	0.266	0.614	4.32	-0.254	3.04
12/15/2012	17:47:00	14.784	14.516	0.268	0.618	4.32	-0.258	3.10
12/15/2012	18:02:00	14.777	14.517	0.260	0.600	4.32	-0.240	2.88
12/15/2012	18:17:00	14.779	14.516	0.263	0.607	4.32	-0.247	2.96
12/15/2012	18:32:00	14.781	14.518	0.263	0.607	4.32	-0.247	2.96
12/15/2012	18:47:00	14.784	14.522	0.262	0.604	4.32	-0.244	2.93
12/15/2012	19:02:00	14.784	14.517	0.267	0.616	4.32	-0.256	3.07
12/15/2012	19:17:00	14.780	14.521	0.259	0.598	4.32	-0.238	2.85
12/15/2012	19:32:00	14.781	14.518	0.263	0.607	4.32	-0.247	2.96
12/15/2012	19:47:00	14.774	14.513	0.261	0.602	4.32	-0.242	2.91
12/15/2012	20:02:00	14.782	14.516	0.266	0.614	4.32	-0.254	3.04
12/15/2012	20:17:00	14.778	14.521	0.257	0.593	4.32	-0.233	2.79
12/15/2012	20:32:00	14.781	14.512	0.269	0.621	4.32	-0.261	3.13
12/15/2012	20:47:00	14.774	14.518	0.256	0.591	4.32	-0.231	2.77
12/15/2012	21:02:00	14.773	14.518	0.255	0.588	4.32	-0.228	2.74
12/15/2012	21:17:00	14.773	14.521	0.252	0.581	4.32	-0.221	2.66
12/15/2012	21:32:00	14.777	14.509	0.268	0.618	4.32	-0.258	3.10
12/15/2012	21:47:00	14.762	14.513	0.249	0.574	4.32	-0.214	2.57
12/15/2012	22:02:00	14.771	14.513	0.258	0.595	4.32	-0.235	2.82
12/15/2012	22:17:00	14.770	14.504	0.266	0.614	4.32	-0.254	3.04
12/15/2012	22:32:00	14.769	14.501	0.268	0.618	4.32	-0.258	3.10
12/15/2012	22:47:00	14.763	14.505	0.258	0.595	4.32	-0.235	2.82
12/15/2012	23:02:00	14.755	14.499	0.256	0.591	4.32	-0.231	2.77
12/15/2012	23:17:00	14.758	14.496	0.262	0.604	4.32	-0.244	2.93
12/15/2012	23:32:00	14.759	14.504	0.255	0.588	4.32	-0.228	2.74
12/15/2012	23:47:00	14.756	14.493	0.263	0.607	4.32	-0.247	2.96
12/16/2012	0:02:00	14.758	14.495	0.263	0.607	4.32	-0.247	2.96
12/16/2012	0:17:00	14.754	14.494	0.260	0.600	4.32	-0.240	2.88
12/16/2012	0:32:00	14.757	14.493	0.264	0.609	4.32	-0.249	2.99
12/16/2012	0:47:00	14.759	14.486	0.273	0.630	4.32	-0.270	3.24
12/16/2012	1:02:00	14.744	14.490	0.254	0.586	4.32	-0.226	2.71
12/16/2012	1:17:00	14.746	14.489	0.257	0.593	4.32	-0.233	2.79
12/16/2012	1:32:00	14.748	14.477	0.271	0.625	4.32	-0.265	3.18
12/16/2012	1:47:00	14.747	14.482	0.265	0.611	4.32	-0.251	3.02
12/16/2012	2:02:00	14.741	14.482	0.259	0.598	4.32	-0.238	2.85
12/16/2012	2:17:00	14.745	14.481	0.264	0.609	4.32	-0.249	2.99
12/16/2012	2:32:00	14.745	14.478	0.267	0.616	4.32	-0.256	3.07

12/16/2012	2:47:00	14.737	14.475	0.262	0.604	4.32	-0.244	2.93
12/16/2012	3:02:00	14.743	14.481	0.262	0.604	4.32	-0.244	2.93
12/16/2012	3:17:00	14.747	14.481	0.266	0.614	4.32	-0.254	3.04
12/16/2012	3:32:00	14.751	14.487	0.264	0.609	4.32	-0.249	2.99
12/16/2012	3:47:00	14.750	14.487	0.263	0.607	4.32	-0.247	2.96
12/16/2012	4:02:00	14.742	14.481	0.261	0.602	4.32	-0.242	2.91
12/16/2012	4:17:00	14.743	14.476	0.267	0.616	4.32	-0.256	3.07
12/16/2012	4:32:00	14.741	14.486	0.255	0.588	4.32	-0.228	2.74
12/16/2012	4:47:00	14.743	14.486	0.257	0.593	4.32	-0.233	2.79
12/16/2012	5:02:00	14.745	14.479	0.266	0.614	4.32	-0.254	3.04
12/16/2012	5:17:00	14.744	14.480	0.264	0.609	4.32	-0.249	2.99
12/16/2012	5:32:00	14.742	14.480	0.262	0.604	4.32	-0.244	2.93
12/16/2012	5:47:00	14.748	14.481	0.267	0.616	4.32	-0.256	3.07
12/16/2012	6:02:00	14.743	14.485	0.258	0.595	4.32	-0.235	2.82
12/16/2012	6:17:00	14.749	14.482	0.267	0.616	4.32	-0.256	3.07
12/16/2012	6:32:00	14.746	14.484	0.262	0.604	4.32	-0.244	2.93
12/16/2012	6:47:00	14.742	14.479	0.263	0.607	4.32	-0.247	2.96
12/16/2012	7:02:00	14.746	14.482	0.264	0.609	4.32	-0.249	2.99
12/16/2012	7:17:00	14.741	14.486	0.255	0.588	4.32	-0.228	2.74
12/16/2012	7:32:00	14.752	14.490	0.262	0.604	4.32	-0.244	2.93
12/16/2012	7:47:00	14.752	14.488	0.264	0.609	4.32	-0.249	2.99
12/16/2012	8:02:00	14.754	14.489	0.265	0.611	4.32	-0.251	3.02
12/16/2012	8:17:00	14.751	14.489	0.262	0.604	4.32	-0.244	2.93
12/16/2012	8:32:00	14.748	14.487	0.261	0.602	4.32	-0.242	2.91
12/16/2012	8:47:00	14.743	14.484	0.259	0.598	4.32	-0.238	2.85
12/16/2012	9:02:00	14.743	14.484	0.259	0.598	4.32	-0.238	2.85
12/16/2012	9:17:00	14.747	14.486	0.261	0.602	4.32	-0.242	2.91
12/16/2012	9:32:00	14.745	14.488	0.257	0.593	4.32	-0.233	2.79
12/16/2012	9:47:00	14.747	14.494	0.253	0.584	4.32	-0.224	2.68
12/16/2012	10:02:00	14.750	14.487	0.263	0.607	4.32	-0.247	2.96
12/16/2012	10:17:00	14.746	14.491	0.255	0.588	4.32	-0.228	2.74
12/16/2012	10:32:00	14.752	14.495	0.257	0.593	4.32	-0.233	2.79
12/16/2012	10:47:00	14.749	14.490	0.259	0.598	4.32	-0.238	2.85
12/16/2012	11:02:00	14.749	14.479	0.270	0.623	4.32	-0.263	3.15
12/16/2012	11:17:00	14.738	14.475	0.263	0.607	4.32	-0.247	2.96
12/16/2012	11:32:00	14.737	14.477	0.260	0.600	4.32	-0.240	2.88
12/16/2012	11:47:00	14.732	14.472	0.260	0.600	4.32	-0.240	2.88
12/16/2012	12:02:00	14.728	14.474	0.254	0.586	4.32	-0.226	2.71
12/16/2012	12:17:00	14.730	14.467	0.263	0.607	4.32	-0.247	2.96
12/16/2012	12:32:00	14.729	14.462	0.267	0.616	4.32	-0.256	3.07
12/16/2012	12:47:00	14.723	14.461	0.262	0.604	4.32	-0.244	2.93
12/16/2012	13:02:00	14.718	14.454	0.264	0.609	4.32	-0.249	2.99
12/16/2012	13:17:00	14.721	14.461	0.260	0.600	4.32	-0.240	2.88
12/16/2012	13:32:00	14.714	14.453	0.261	0.602	4.32	-0.242	2.91
12/16/2012	13:47:00	14.710	14.451	0.259	0.598	4.32	-0.238	2.85
12/16/2012	14:02:00	14.714	14.455	0.259	0.598	4.32	-0.238	2.85
12/16/2012	14:17:00	14.715	14.451	0.264	0.609	4.32	-0.249	2.99
12/16/2012	14:32:00	14.708	14.445	0.263	0.607	4.32	-0.247	2.96
12/16/2012	14:47:00	14.705	14.442	0.263	0.607	4.32	-0.247	2.96
12/16/2012	15:02:00	14.709	14.439	0.270	0.623	4.32	-0.263	3.15
12/16/2012	15:17:00	14.703	14.436	0.267	0.616	4.32	-0.256	3.07
12/16/2012	15:32:00	14.700	14.442	0.258	0.595	4.32	-0.235	2.82
12/16/2012	15:47:00	14.710	14.443	0.267	0.616	4.32	-0.256	3.07
12/16/2012	16:02:00	14.710	14.442	0.268	0.618	4.32	-0.258	3.10
12/16/2012	16:17:00	14.707	14.440	0.267	0.616	4.32	-0.256	3.07
12/16/2012	16:32:00	14.706	14.441	0.265	0.611	4.32	-0.251	3.02
12/16/2012	16:47:00	14.704	14.439	0.265	0.611	4.32	-0.251	3.02
12/16/2012	17:02:00	14.702	14.436	0.266	0.614	4.32	-0.254	3.04
12/16/2012	17:17:00	14.700	14.434	0.266	0.614	4.32	-0.254	3.04
12/16/2012	17:32:00	14.698	14.435	0.263	0.607	4.32	-0.247	2.96
12/16/2012	17:47:00	14.698	14.432	0.266	0.614	4.32	-0.254	3.04
12/16/2012	18:02:00	14.696	14.434	0.262	0.604	4.32	-0.244	2.93
12/16/2012	18:17:00	14.700	14.434	0.266	0.614	4.32	-0.254	3.04
12/16/2012	18:32:00	14.698	14.429	0.269	0.621	4.32	-0.261	3.13
12/16/2012	18:47:00	14.695	14.427	0.268	0.618	4.32	-0.258	3.10
12/16/2012	19:02:00	14.689	14.429	0.260	0.600	4.32	-0.240	2.88
12/16/2012	19:17:00	14.694	14.428	0.266	0.614	4.32	-0.254	3.04
12/16/2012	19:32:00	14.699	14.428	0.271	0.625	4.32	-0.265	3.18
12/16/2012	19:47:00	14.695	14.426	0.269	0.621	4.32	-0.261	3.13
12/16/2012	20:02:00	14.689	14.423	0.266	0.614	4.32	-0.254	3.04
12/16/2012	20:17:00	14.699	14.423	0.276	0.637	4.32	-0.277	3.32
12/16/2012	20:32:00	14.691	14.422	0.269	0.621	4.32	-0.261	3.13
12/16/2012	20:47:00	14.688	14.420	0.268	0.618	4.32	-0.258	3.10
12/16/2012	21:02:00	14.683	14.424	0.259	0.598	4.32	-0.238	2.85
12/16/2012	21:17:00	14.686	14.422	0.264	0.609	4.32	-0.249	2.99
12/16/2012	21:32:00	14.690	14.422	0.268	0.618	4.32	-0.258	3.10
12/16/2012	21:47:00	14.691	14.423	0.268	0.618	4.32	-0.258	3.10
12/16/2012	22:02:00	14.683	14.422	0.261	0.602	4.32	-0.242	2.91
12/16/2012	22:17:00	14.689	14.420	0.269	0.621	4.32	-0.261	3.13
12/16/2012	22:32:00	14.691	14.411	0.280	0.646	4.32	-0.286	3.43
12/16/2012	22:47:00	14.686	14.416	0.270	0.623	4.32	-0.263	3.15
12/16/2012	23:02:00	14.689	14.415	0.274	0.632	4.32	-0.272	3.27
12/16/2012	23:17:00	14.686	14.411	0.275	0.634	4.32	-0.274	3.29
12/16/2012	23:32:00	14.687	14.410	0.277	0.639	4.32	-0.279	3.35
12/16/2012	23:47:00	14.690	14.410	0.280	0.646	4.32	-0.286	3.43
12/17/2012	0:02:00	14.703	14.410	0.293	0.676	4.32	-0.316	3.79
12/17/2012	0:17:00	14.708	14.411	0.297	0.685	4.32	-0.325	3.90
12/17/2012	0:32:00	14.713	14.403	0.310	0.715	4.32	-0.355	4.26
12/17/2012	0:47:00	14.729	14.406	0.323	0.745	4.32	-0.385	4.62
12/17/2012	1:02:00	14.800	14.403	0.397	0.916	4.32	-0.556	6.67
12/17/2012	1:17:00	14.900	14.406	0.494	1.140	4.32	-0.780	9.36
12/17/2012	1:32:00	14.979	14.399	0.580	1.338	4.32	-0.978	11.74
12/17/2012	1:47:00	15.064	14.395	0.669	1.543	4.32	-1.183	14.20
12/17/2012	2:02:00	15.110	14.399	0.711	1.640	4.32	-1.280	15.36
12/17/2012	2:17:00	15.114	14.396	0.718	1.656	4.32	-1.296	15.56
12/17/2012	2:32:00	15.108	14.400	0.708	1.633	4.32	-1.273	15.28
12/17/2012	2:47:00	15.090	14.388	0.702	1.620	4.32	-1.260	15.11
12/17/2012	3:02:00	15.053	14.388	0.665	1.534	4.32	-1.174	14.09
12/17/2012	3:17:00	15.019	14.385	0.634	1.463	4.32	-1.103	13.23
12/17/2012	3:32:00	14.988	14.382	0.606	1.398	4.32	-1.038	12.46
12/17/2012	3:47:00	14.959	14.369	0.590	1.361	4.32	-1.001	12.01
12/17/2012	4:02:00	14.919	14.367	0.552	1.273	4.32	-0.913	10.96
12/17/2012	4:17:00	14.893	14.353	0.540	1.246	4.32	-0.886	10.63
12/17/2012	4:32:00	14.866	14.344	0.522	1.204	4.32	-0.844	10.13
12/17/2012	4:47:00	14.833	14.345	0.488	1.126	4.32	-0.766	9.19
12/17/2012	5:02:00	14.815	14.347	0.468	1.080	4.32	-0.720	8.64
12/17/2012	5:17:00	14.803	14.352	0.451	1.040	4.32	-0.680	8.17
12/17/2012	5:32:00	14.792	14.354	0.438	1.010	4.32	-0.650	7.81
12/17/2012	5:47:00	14.799	14.380	0.419	0.967	4.32	-0.607	7.28
12/17/2012	6:02:00	14.793	14.379	0.414	0.955	4.32	-0.595	7.14
12/17/2012	6:17:00	14.779	14.378	0.401	0.925	4.32	-0.565	6.78
12/17/2012	6:32:00	14.770	14.373	0.397	0.916	4.32	-0.556	6.67
12/17/2012	6:47:00	14.758	14.378	0.380	0.877	4.32	-0.517	6.20
12/17/2012	7:02:00	14.761	14.395	0.366	0.844	4.32	-0.484	5.81
12/17/2012	7:17:00	14.760	14.391	0.369	0.851	4.32	-0.491	5.90
12/17/2012	7:32:00	14.758	14.390	0.368	0.849	4.32	-0.489	5.87
12/17/2012	7:47:00	14.744	14.386	0.358	0.826	4.32	-0.466	5.59
12/17/2012	8:02:00	14.745	14.388	0.357	0.824	4.32	-0.464	5.56
12/17/2012	8:17:00	14.737	14.387	0.350	0.807	4.32	-0.447	5.37
12/17/2012	8:32:00	14.732	14.391	0.341	0.787	4.32	-0.427	5.12
12/17/2012	8:47:00	14.726	14.389	0.337	0.777	4.32	-0.417	5.01
12/17/2012	9:02:00	14.720	14.387	0.333	0.768	4.32	-0.408	4.90
12/17/2012	9:17:00	14.725	14.391	0.334	0.771	4.32	-0.411	4.93
12/17/2012	9:32:00	14.725	14.397	0.328	0.757	4.32	-0.397	4.76
12/17/2012	9:47:00	14.726	14.397	0.329	0.759	4.32	-0.399	4.79
12/17/2012	10:02:00	14.720	14.396	0.324	0.747	4.32	-0.387	4.65
12/17/2012	10:17:00	14.716	14.392	0.324	0.747	4.32	-0.387	4.65
12/17/2012	10:32:00	14.713	14.394	0.319	0.736	4.32	-0.376	4.51
12/17/2012	10:47:00	14.713	14.393	0.320	0.738	4.32	-0.378	4.54
12/17/2012	11:02:00	14.700	14.384	0.316	0.729	4.32	-0.369	4.43
12/17/2012	11:17:00	14.692	14.384	0.308	0.711	4.32	-0.351	4.21
12/17/2012	11:32:00	14.692	14.383	0.309	0.713	4.32	-0.353	4.23
12/17/2012	11:47:00	14.691	14.373	0.318	0.734	4.32	-0.374	4.48

12/17/2012	12:02:00	14.679	14.367	0.312	0.720	4.32	-0.360	4.32
12/17/2012	12:17:00	14.674	14.362	0.312	0.720	4.32	-0.360	4.32
12/17/2012	12:32:00	14.671	14.363	0.308	0.711	4.32	-0.351	4.21
12/17/2012	12:47:00	14.665	14.359	0.306	0.706	4.32	-0.346	4.15
12/17/2012	13:02:00	14.666	14.359	0.307	0.708	4.32	-0.348	4.18
12/17/2012	13:17:00	14.654	14.352	0.302	0.697	4.32	-0.337	4.04
12/17/2012	13:32:00	14.660	14.360	0.300	0.692	4.32	-0.332	3.99
12/17/2012	13:47:00	14.657	14.355	0.302	0.697	4.32	-0.337	4.04
12/17/2012	14:02:00	14.656	14.357	0.299	0.690	4.32	-0.330	3.96
12/17/2012	14:17:00	14.661	14.360	0.301	0.694	4.32	-0.334	4.01
12/17/2012	14:32:00	14.656	14.353	0.303	0.699	4.32	-0.339	4.07
12/17/2012	14:47:00	14.651	14.351	0.300	0.692	4.32	-0.332	3.99
12/17/2012	15:02:00	14.652	14.342	0.310	0.715	4.32	-0.355	4.26
12/17/2012	15:17:00	14.649	14.339	0.310	0.715	4.32	-0.355	4.26
12/17/2012	15:32:00	14.658	14.340	0.318	0.734	4.32	-0.374	4.48
12/17/2012	15:47:00	14.666	14.335	0.331	0.764	4.32	-0.404	4.84
12/17/2012	16:02:00	14.698	14.326	0.372	0.858	4.32	-0.498	5.98
12/17/2012	16:17:00	14.715	14.330	0.385	0.888	4.32	-0.528	6.34
12/17/2012	16:32:00	14.723	14.323	0.400	0.923	4.32	-0.563	6.75
12/17/2012	16:47:00	14.739	14.323	0.416	0.960	4.32	-0.600	7.20
12/17/2012	17:02:00	14.739	14.313	0.426	0.983	4.32	-0.623	7.47
12/17/2012	17:17:00	14.721	14.324	0.397	0.916	4.32	-0.556	6.67
12/17/2012	17:32:00	14.743	14.321	0.422	0.974	4.32	-0.614	7.36
12/17/2012	17:47:00	14.732	14.326	0.406	0.937	4.32	-0.577	6.92
12/17/2012	18:02:00	14.741	14.311	0.430	0.992	4.32	-0.632	7.58
12/17/2012	18:17:00	14.726	14.312	0.414	0.955	4.32	-0.595	7.14
12/17/2012	18:32:00	14.723	14.303	0.420	0.969	4.32	-0.609	7.31
12/17/2012	18:47:00	14.724	14.323	0.401	0.925	4.32	-0.565	6.78
12/17/2012	19:02:00	14.713	14.310	0.403	0.930	4.32	-0.570	6.84
12/17/2012	19:17:00	14.702	14.310	0.392	0.904	4.32	-0.544	6.53
12/17/2012	19:32:00	14.695	14.305	0.390	0.900	4.32	-0.540	6.48
12/17/2012	19:47:00	14.696	14.314	0.382	0.881	4.32	-0.521	6.26
12/17/2012	20:02:00	14.699	14.317	0.382	0.881	4.32	-0.521	6.26
12/17/2012	20:17:00	14.689	14.314	0.375	0.865	4.32	-0.505	6.06
12/17/2012	20:32:00	14.678	14.310	0.368	0.849	4.32	-0.489	5.87
12/17/2012	20:47:00	14.678	14.313	0.365	0.842	4.32	-0.482	5.78
12/17/2012	21:02:00	14.669	14.310	0.359	0.828	4.32	-0.468	5.62
12/17/2012	21:17:00	14.664	14.317	0.347	0.801	4.32	-0.441	5.29
12/17/2012	21:32:00	14.664	14.312	0.352	0.812	4.32	-0.452	5.42
12/17/2012	21:47:00	14.658	14.318	0.340	0.784	4.32	-0.424	5.09
12/17/2012	22:02:00	14.658	14.313	0.345	0.796	4.32	-0.436	5.23
12/17/2012	22:17:00	14.654	14.316	0.338	0.780	4.32	-0.420	5.04
12/17/2012	22:32:00	14.651	14.317	0.334	0.771	4.32	-0.411	4.93
12/17/2012	22:47:00	14.646	14.310	0.336	0.775	4.32	-0.415	4.98
12/17/2012	23:02:00	14.647	14.312	0.335	0.773	4.32	-0.413	4.95
12/17/2012	23:17:00	14.640	14.309	0.331	0.764	4.32	-0.404	4.84
12/17/2012	23:32:00	14.640	14.312	0.328	0.757	4.32	-0.397	4.76
12/17/2012	23:47:00	14.636	14.312	0.324	0.747	4.32	-0.387	4.65
12/18/2012	0:02:00	14.635	14.314	0.321	0.741	4.32	-0.381	4.57
12/18/2012	0:17:00	14.635	14.313	0.322	0.743	4.32	-0.383	4.59
12/18/2012	0:32:00	14.633	14.316	0.317	0.731	4.32	-0.371	4.46
12/18/2012	0:47:00	14.631	14.314	0.317	0.731	4.32	-0.371	4.46
12/18/2012	1:02:00	14.635	14.315	0.320	0.738	4.32	-0.378	4.54
12/18/2012	1:17:00	14.633	14.315	0.318	0.734	4.32	-0.374	4.48
12/18/2012	1:32:00	14.627	14.309	0.318	0.734	4.32	-0.374	4.48
12/18/2012	1:47:00	14.626	14.301	0.325	0.750	4.32	-0.390	4.68
12/18/2012	2:02:00	14.622	14.312	0.310	0.715	4.32	-0.355	4.26
12/18/2012	2:17:00	14.624	14.301	0.323	0.745	4.32	-0.385	4.62
12/18/2012	2:32:00	14.617	14.291	0.326	0.752	4.32	-0.392	4.70
12/18/2012	2:47:00	14.618	14.315	0.303	0.699	4.32	-0.339	4.07
12/18/2012	3:02:00	14.616	14.305	0.311	0.717	4.32	-0.357	4.29
12/18/2012	3:17:00	14.616	14.294	0.322	0.743	4.32	-0.383	4.59
12/18/2012	3:32:00	14.614	14.314	0.300	0.692	4.32	-0.332	3.99
12/18/2012	3:47:00	14.618	14.306	0.312	0.720	4.32	-0.360	4.32
12/18/2012	4:02:00	14.614	14.305	0.309	0.713	4.32	-0.353	4.23
12/18/2012	4:17:00	14.611	14.293	0.318	0.734	4.32	-0.374	4.48
12/18/2012	4:32:00	14.607	14.296	0.311	0.717	4.32	-0.357	4.29
12/18/2012	4:47:00	14.605	14.309	0.296	0.683	4.32	-0.323	3.87
12/18/2012	5:02:00	14.611	14.301	0.310	0.715	4.32	-0.355	4.26
12/18/2012	5:17:00	14.607	14.310	0.297	0.685	4.32	-0.325	3.90
12/18/2012	5:32:00	14.610	14.306	0.304	0.701	4.32	-0.341	4.10
12/18/2012	5:47:00	14.612	14.309	0.303	0.699	4.32	-0.339	4.07
12/18/2012	6:02:00	14.609	14.307	0.302	0.697	4.32	-0.337	4.04
12/18/2012	6:17:00	14.615	14.315	0.300	0.692	4.32	-0.332	3.99
12/18/2012	6:32:00	14.613	14.306	0.307	0.708	4.32	-0.348	4.18
12/18/2012	6:47:00	14.613	14.315	0.298	0.687	4.32	-0.327	3.93
12/18/2012	7:02:00	14.613	14.316	0.297	0.685	4.32	-0.325	3.90
12/18/2012	7:17:00	14.615	14.327	0.288	0.664	4.32	-0.304	3.65
12/18/2012	7:32:00	14.616	14.320	0.296	0.683	4.32	-0.323	3.87
12/18/2012	7:47:00	14.620	14.320	0.300	0.692	4.32	-0.332	3.99
12/18/2012	8:02:00	14.624	14.333	0.291	0.671	4.32	-0.311	3.74
12/18/2012	8:17:00	14.621	14.325	0.296	0.683	4.32	-0.323	3.87
12/18/2012	8:32:00	14.620	14.331	0.289	0.667	4.32	-0.307	3.68
12/18/2012	8:47:00	14.626	14.334	0.292	0.674	4.32	-0.314	3.76
12/18/2012	9:02:00	14.624	14.332	0.292	0.674	4.32	-0.314	3.76
12/18/2012	9:17:00	14.624	14.328	0.296	0.683	4.32	-0.323	3.87
12/18/2012	9:32:00	14.629	14.337	0.292	0.674	4.32	-0.314	3.76
12/18/2012	9:47:00	14.630	14.339	0.291	0.671	4.32	-0.311	3.74
12/18/2012	10:02:00	14.634	14.339	0.295	0.681	4.32	-0.321	3.85
12/18/2012	10:17:00	14.627	14.339	0.288	0.664	4.32	-0.304	3.65
12/18/2012	10:32:00	14.632	14.342	0.290	0.669	4.32	-0.309	3.71
12/18/2012	10:47:00	14.629	14.340	0.289	0.667	4.32	-0.307	3.68
12/18/2012	11:02:00	14.630	14.336	0.294	0.678	4.32	-0.318	3.82
12/18/2012	11:17:00	14.631	14.340	0.291	0.671	4.32	-0.311	3.74
12/18/2012	11:32:00	14.634	14.345	0.289	0.667	4.32	-0.307	3.68
12/18/2012	11:47:00	14.630	14.337	0.293	0.676	4.32	-0.316	3.79
12/18/2012	12:02:00	14.631	14.342	0.289	0.667	4.32	-0.307	3.68
12/18/2012	12:17:00	14.633	14.341	0.292	0.674	4.32	-0.314	3.76
12/18/2012	12:32:00	14.628	14.341	0.287	0.662	4.32	-0.302	3.63
12/18/2012	12:47:00	14.628	14.338	0.290	0.669	4.32	-0.309	3.71
12/18/2012	13:02:00	14.627	14.352	0.275	0.634	4.32	-0.274	3.29
12/18/2012	13:17:00	14.631	14.341	0.290	0.669	4.32	-0.309	3.71
12/18/2012	13:32:00	14.634	14.347	0.287	0.662	4.32	-0.302	3.63
12/18/2012	13:47:00	14.638	14.350	0.288	0.664	4.32	-0.304	3.65
12/18/2012	14:02:00	14.637	14.348	0.289	0.667	4.32	-0.307	3.68
12/18/2012	14:17:00	14.637	14.352	0.285	0.657	4.32	-0.297	3.57
12/18/2012	14:32:00	14.639	14.359	0.280	0.646	4.32	-0.286	3.43
12/18/2012	14:47:00	14.647	14.367	0.280	0.646	4.32	-0.286	3.43
12/18/2012	15:02:00	14.654	14.368	0.286	0.660	4.32	-0.300	3.60
12/18/2012	15:17:00	14.647	14.370	0.277	0.639	4.32	-0.279	3.35
12/18/2012	15:32:00	14.650	14.371	0.279	0.644	4.32	-0.284	3.40
12/18/2012	15:47:00	14.649	14.371	0.278	0.641	4.32	-0.281	3.38
12/18/2012	16:02:00	14.659	14.377	0.282	0.651	4.32	-0.291	3.49
12/18/2012	16:17:00	14.655	14.381	0.274	0.632	4.32	-0.272	3.27
12/18/2012	16:32:00	14.657	14.379	0.278	0.641	4.32	-0.281	3.38
12/18/2012	16:47:00	14.660	14.382	0.278	0.641	4.32	-0.281	3.38
12/18/2012	17:02:00	14.660	14.380	0.280	0.646	4.32	-0.286	3.43
12/18/2012	17:17:00	14.663	14.389	0.274	0.632	4.32	-0.272	3.27
12/18/2012	17:32:00	14.664	14.393	0.271	0.625	4.32	-0.265	3.18
12/18/2012	17:47:00	14.663	14.397	0.266	0.614	4.32	-0.254	3.04
12/18/2012	18:02:00	14.667	14.396	0.271	0.625	4.32	-0.265	3.18
12/18/2012	18:17:00	14.671	14.389	0.282	0.651	4.32	-0.291	3.49
12/18/2012	18:32:00	14.672	14.408	0.264	0.609	4.32	-0.249	2.99
12/18/2012	18:47:00	14.677	14.409	0.268	0.618	4.32	-0.258	3.10
12/18/2012	19:02:00	14.678	14.408	0.270	0.623	4.32	-0.263	3.15
12/18/2012	19:17:00	14.677	14.401	0.276	0.637	4.32	-0.277	3.32
12/18/2012	19:32:00	14.683	14.410	0.273	0.630	4.32	-0.270	3.24
12/18/2012	19:47:00	14.689	14.421	0.268	0.618	4.32	-0.258	3.10
12/18/2012	20:02:00	14.694	14.423	0.271	0.625	4.32	-0.265	3.18
12/18/2012	20:17:00	14.695	14.425	0.270	0.623	4.32	-0.263	3.15
12/18/2012	20:32:00	14.692	14.419	0.273	0.630	4.32	-0.270	3.24
12/18/2012	20:47:00	14.699	14.426	0.273	0.630	4.32	-0.270	3.24
12/18/2012	21:02:00	14.693	14.432	0.261	0.602	4.32	-0.242	2.91

12/18/2012	21:17:00	14.698	14.437	0.261	0.602	4.32	-0.242	2.91
12/18/2012	21:32:00	14.702	14.427	0.275	0.634	4.32	-0.274	3.29
12/18/2012	21:47:00	14.691	14.426	0.265	0.611	4.32	-0.251	3.02
12/18/2012	22:02:00	14.698	14.421	0.277	0.639	4.32	-0.279	3.35
12/18/2012	22:17:00	14.690	14.417	0.273	0.630	4.32	-0.270	3.24
12/18/2012	22:32:00	14.686	14.421	0.265	0.611	4.32	-0.251	3.02
12/18/2012	22:47:00	14.684	14.422	0.262	0.604	4.32	-0.244	2.93
12/18/2012	23:02:00	14.691	14.427	0.264	0.609	4.32	-0.249	2.99
12/18/2012	23:17:00	14.689	14.428	0.261	0.602	4.32	-0.242	2.91
12/18/2012	23:32:00	14.696	14.429	0.267	0.616	4.32	-0.256	3.07
12/18/2012	23:47:00	14.698	14.434	0.264	0.609	4.32	-0.249	2.99
12/19/2012	0:02:00	14.697	14.431	0.266	0.614	4.32	-0.254	3.04
12/19/2012	0:17:00	14.697	14.431	0.266	0.614	4.32	-0.254	3.04
12/19/2012	0:32:00	14.699	14.427	0.272	0.628	4.32	-0.268	3.21
12/19/2012	0:47:00	14.692	14.426	0.266	0.614	4.32	-0.254	3.04
12/19/2012	1:02:00	14.694	14.425	0.269	0.621	4.32	-0.261	3.13
12/19/2012	1:17:00	14.698	14.432	0.266	0.614	4.32	-0.254	3.04
12/19/2012	1:32:00	14.698	14.433	0.265	0.611	4.32	-0.251	3.02
12/19/2012	1:47:00	14.705	14.435	0.270	0.623	4.32	-0.263	3.15
12/19/2012	2:02:00	14.703	14.438	0.265	0.611	4.32	-0.251	3.02
12/19/2012	2:17:00	14.702	14.434	0.268	0.618	4.32	-0.258	3.10
12/19/2012	2:32:00	14.700	14.436	0.264	0.609	4.32	-0.249	2.99
12/19/2012	2:47:00	14.700	14.437	0.263	0.607	4.32	-0.247	2.96
12/19/2012	3:02:00	14.699	14.434	0.265	0.611	4.32	-0.251	3.02
12/19/2012	3:17:00	14.701	14.437	0.264	0.609	4.32	-0.249	2.99
12/19/2012	3:32:00	14.698	14.429	0.269	0.621	4.32	-0.261	3.13
12/19/2012	3:47:00	14.700	14.440	0.260	0.600	4.32	-0.240	2.88
12/19/2012	4:02:00	14.701	14.427	0.274	0.632	4.32	-0.272	3.27
12/19/2012	4:17:00	14.698	14.426	0.272	0.628	4.32	-0.268	3.21
12/19/2012	4:32:00	14.702	14.432	0.270	0.623	4.32	-0.263	3.15
12/19/2012	4:47:00	14.705	14.440	0.265	0.611	4.32	-0.251	3.02
12/19/2012	5:02:00	14.704	14.444	0.260	0.600	4.32	-0.240	2.88
12/19/2012	5:17:00	14.702	14.435	0.267	0.616	4.32	-0.256	3.07
12/19/2012	5:32:00	14.706	14.455	0.251	0.579	4.32	-0.219	2.63
12/19/2012	5:47:00	14.714	14.446	0.268	0.618	4.32	-0.258	3.10
12/19/2012	6:02:00	14.708	14.448	0.260	0.600	4.32	-0.240	2.88
12/19/2012	6:17:00	14.713	14.442	0.271	0.625	4.32	-0.265	3.18
12/19/2012	6:32:00	14.711	14.445	0.266	0.614	4.32	-0.254	3.04
12/19/2012	6:47:00	14.721	14.450	0.271	0.625	4.32	-0.265	3.18
12/19/2012	7:02:00	14.724	14.463	0.261	0.602	4.32	-0.242	2.91
12/19/2012	7:17:00	14.723	14.457	0.266	0.614	4.32	-0.254	3.04
12/19/2012	7:32:00	14.729	14.468	0.261	0.602	4.32	-0.242	2.91
12/19/2012	7:47:00	14.728	14.463	0.265	0.611	4.32	-0.251	3.02
12/19/2012	8:02:00	14.732	14.470	0.262	0.604	4.32	-0.244	2.93
12/19/2012	8:17:00	14.735	14.468	0.267	0.616	4.32	-0.256	3.07
12/19/2012	8:32:00	14.738	14.474	0.264	0.609	4.32	-0.249	2.99
12/19/2012	8:47:00	14.737	14.470	0.267	0.616	4.32	-0.256	3.07
12/19/2012	9:02:00	14.740	14.476	0.264	0.609	4.32	-0.249	2.99
12/19/2012	9:17:00	14.740	14.478	0.262	0.604	4.32	-0.244	2.93
12/19/2012	9:32:00	14.745	14.480	0.265	0.611	4.32	-0.251	3.02
12/19/2012	9:47:00	14.745	14.479	0.266	0.614	4.32	-0.254	3.04
12/19/2012	10:02:00	14.748	14.484	0.264	0.609	4.32	-0.249	2.99
12/19/2012	10:17:00	14.749	14.487	0.262	0.604	4.32	-0.244	2.93
12/19/2012	10:32:00	14.748	14.488	0.260	0.600	4.32	-0.240	2.88
12/19/2012	10:47:00	14.753	14.485	0.268	0.618	4.32	-0.258	3.10
12/19/2012	11:02:00	14.751	14.481	0.270	0.623	4.32	-0.263	3.15
12/19/2012	11:17:00	14.744	14.481	0.263	0.607	4.32	-0.247	2.96
12/19/2012	11:32:00	14.743	14.479	0.264	0.609	4.32	-0.249	2.99
12/19/2012	11:47:00	14.740	14.479	0.261	0.602	4.32	-0.242	2.91
12/19/2012	12:02:00	14.742	14.471	0.271	0.625	4.32	-0.265	3.18
12/19/2012	12:17:00	14.737	14.469	0.268	0.618	4.32	-0.258	3.10
12/19/2012	12:32:00	14.736	14.471	0.265	0.611	4.32	-0.251	3.02
12/19/2012	12:47:00	14.735	14.469	0.266	0.614	4.32	-0.254	3.04
12/19/2012	13:02:00	14.730	14.466	0.264	0.609	4.32	-0.249	2.99
12/19/2012	13:17:00	14.737	14.469	0.268	0.618	4.32	-0.258	3.10
12/19/2012	13:32:00	14.727	14.469	0.258	0.595	4.32	-0.235	2.82
12/19/2012	13:47:00	14.730	14.464	0.266	0.614	4.32	-0.254	3.04
12/19/2012	14:02:00	14.728	14.462	0.266	0.614	4.32	-0.254	3.04
12/19/2012	14:17:00	14.722	14.465	0.257	0.593	4.32	-0.233	2.79
12/19/2012	14:32:00	14.728	14.466	0.262	0.604	4.32	-0.244	2.93
12/19/2012	14:47:00	14.729	14.463	0.266	0.614	4.32	-0.254	3.04
12/19/2012	15:02:00	14.728	14.464	0.264	0.609	4.32	-0.249	2.99
12/19/2012	15:17:00	14.724	14.466	0.258	0.595	4.32	-0.235	2.82
12/19/2012	15:32:00	14.725	14.466	0.259	0.598	4.32	-0.238	2.85
12/19/2012	15:47:00	14.728	14.469	0.259	0.598	4.32	-0.238	2.85
12/19/2012	16:02:00	14.729	14.466	0.263	0.607	4.32	-0.247	2.96
12/19/2012	16:17:00	14.729	14.468	0.261	0.602	4.32	-0.242	2.91
12/19/2012	16:32:00	14.730	14.469	0.261	0.602	4.32	-0.242	2.91
12/19/2012	16:47:00	14.731	14.472	0.259	0.598	4.32	-0.238	2.85
12/19/2012	17:02:00	14.736	14.471	0.265	0.611	4.32	-0.251	3.02
12/19/2012	17:17:00	14.731	14.477	0.254	0.586	4.32	-0.226	2.71
12/19/2012	17:32:00	14.739	14.474	0.265	0.611	4.32	-0.251	3.02
12/19/2012	17:47:00	14.739	14.480	0.259	0.598	4.32	-0.238	2.85
12/19/2012	18:02:00	14.747	14.487	0.260	0.600	4.32	-0.240	2.88
12/19/2012	18:17:00	14.746	14.488	0.258	0.595	4.32	-0.235	2.82
12/19/2012	18:32:00	14.750	14.498	0.252	0.581	4.32	-0.221	2.66
12/19/2012	18:47:00	14.752	14.496	0.256	0.591	4.32	-0.231	2.77
12/19/2012	19:02:00	14.752	14.488	0.264	0.609	4.32	-0.249	2.99
12/19/2012	19:17:00	14.750	14.490	0.260	0.600	4.32	-0.240	2.88
12/19/2012	19:32:00	14.752	14.487	0.265	0.611	4.32	-0.251	3.02
12/19/2012	19:47:00	14.750	14.491	0.259	0.598	4.32	-0.238	2.85
12/19/2012	20:02:00	14.753	14.493	0.260	0.600	4.32	-0.240	2.88
12/19/2012	20:17:00	14.758	14.490	0.268	0.618	4.32	-0.258	3.10
12/19/2012	20:32:00	14.759	14.498	0.261	0.602	4.32	-0.242	2.91
12/19/2012	20:47:00	14.756	14.491	0.265	0.611	4.32	-0.251	3.02
12/19/2012	21:02:00	14.761	14.501	0.260	0.600	4.32	-0.240	2.88
12/19/2012	21:17:00	14.761	14.498	0.263	0.607	4.32	-0.247	2.96
12/19/2012	21:32:00	14.762	14.508	0.254	0.586	4.32	-0.226	2.71
12/19/2012	21:47:00	14.759	14.508	0.251	0.579	4.32	-0.219	2.63
12/19/2012	22:02:00	14.768	14.505	0.263	0.607	4.32	-0.247	2.96
12/19/2012	22:17:00	14.767	14.513	0.254	0.586	4.32	-0.226	2.71
12/19/2012	22:32:00	14.771	14.508	0.263	0.607	4.32	-0.247	2.96
12/19/2012	22:47:00	14.767	14.504	0.263	0.607	4.32	-0.247	2.96
12/19/2012	23:02:00	14.760	14.509	0.251	0.579	4.32	-0.219	2.63
12/19/2012	23:17:00	14.768	14.504	0.264	0.609	4.32	-0.249	2.99
12/19/2012	23:32:00	14.769	14.504	0.265	0.611	4.32	-0.251	3.02
12/19/2012	23:47:00	14.766	14.508	0.258	0.595	4.32	-0.235	2.82
12/20/2012	0:02:00	14.767	14.511	0.256	0.591	4.32	-0.231	2.77
12/20/2012	0:17:00	14.768	14.515	0.253	0.584	4.32	-0.224	2.68
12/20/2012	0:32:00	14.768	14.505	0.263	0.607	4.32	-0.247	2.96
12/20/2012	0:47:00	14.765	14.507	0.258	0.595	4.32	-0.235	2.82
12/20/2012	1:02:00	14.765	14.506	0.259	0.598	4.32	-0.238	2.85
12/20/2012	1:17:00	14.768	14.505	0.263	0.607	4.32	-0.247	2.96
12/20/2012	1:32:00	14.764	14.502	0.262	0.604	4.32	-0.244	2.93
12/20/2012	1:47:00	14.764	14.503	0.261	0.602	4.32	-0.242	2.91
12/20/2012	2:02:00	14.767	14.509	0.258	0.595	4.32	-0.235	2.82
12/20/2012	2:17:00	14.768	14.505	0.263	0.607	4.32	-0.247	2.96
12/20/2012	2:32:00	14.767	14.505	0.262	0.604	4.32	-0.244	2.93
12/20/2012	2:47:00	14.764	14.508	0.256	0.591	4.32	-0.231	2.77
12/20/2012	3:02:00	14.766	14.507	0.259	0.598	4.32	-0.238	2.85
12/20/2012	3:17:00	14.771	14.511	0.260	0.600	4.32	-0.240	2.88
12/20/2012	3:32:00	14.766	14.511	0.255	0.588	4.32	-0.228	2.74
12/20/2012	3:47:00	14.774	14.510	0.264	0.609	4.32	-0.249	2.99
12/20/2012	4:02:00	14.764	14.507	0.257	0.593	4.32	-0.233	2.79
12/20/2012	4:17:00	14.766	14.507	0.259	0.598	4.32	-0.238	2.85
12/20/2012	4:32:00	14.759	14.498	0.261	0.602	4.32	-0.242	2.91
12/20/2012	4:47:00	14.762	14.504	0.258	0.595	4.32	-0.235	2.82
12/20/2012	5:02:00	14.754	14.505	0.249	0.574	4.32	-0.214	2.57
12/20/2012	5:17:00	14.763	14.502	0.261	0.602	4.32	-0.242	2.91
12/20/2012	5:32:00	14.764	14.502	0.262	0.604	4.32	-0.244	2.93
12/20/2012	5:47:00	14.767	14.501	0.266	0.614	4.32	-0.254	3.04
12/20/2012	6:02:00	14.761	14.502	0.259	0.598	4.32	-0.238	2.85
12/20/2012	6:17:00	14.763	14.508	0.255	0.588	4.32	-0.228	2.74

12/20/2012	6:32:00	14.755	14.502	0.253	0.584	4.32	-0.224	2.68
12/20/2012	6:47:00	14.759	14.506	0.253	0.584	4.32	-0.224	2.68
12/20/2012	7:02:00	14.758	14.500	0.258	0.595	4.32	-0.235	2.82
12/20/2012	7:17:00	14.752	14.506	0.246	0.568	4.32	-0.208	2.49
12/20/2012	7:32:00	14.758	14.496	0.262	0.604	4.32	-0.244	2.93
12/20/2012	7:47:00	14.756	14.497	0.259	0.598	4.32	-0.238	2.85
12/20/2012	8:02:00	14.750	14.491	0.259	0.598	4.32	-0.238	2.85
12/20/2012	8:17:00	14.748	14.490	0.258	0.595	4.32	-0.235	2.82
12/20/2012	8:32:00	14.747	14.488	0.259	0.598	4.32	-0.238	2.85
12/20/2012	8:47:00	14.751	14.490	0.261	0.602	4.32	-0.242	2.91
12/20/2012	9:02:00	14.745	14.488	0.257	0.593	4.32	-0.233	2.79
12/20/2012	9:17:00	14.749	14.496	0.253	0.584	4.32	-0.224	2.68
12/20/2012	9:32:00	14.745	14.484	0.261	0.602	4.32	-0.242	2.91
12/20/2012	9:47:00	14.744	14.485	0.259	0.598	4.32	-0.238	2.85
12/20/2012	10:02:00	14.737	14.487	0.250	0.577	4.32	-0.217	2.60
12/20/2012	10:17:00	14.741	14.485	0.256	0.591	4.32	-0.231	2.77
12/20/2012	10:32:00	14.745	14.480	0.265	0.611	4.32	-0.251	3.02
12/20/2012	10:47:00	14.737	14.482	0.255	0.588	4.32	-0.228	2.74
12/20/2012	11:02:00	14.740	14.477	0.263	0.607	4.32	-0.247	2.96
12/20/2012	11:17:00	14.729	14.475	0.254	0.586	4.32	-0.226	2.71
12/20/2012	11:32:00	14.724	14.463	0.261	0.602	4.32	-0.242	2.91
12/20/2012	11:47:00	14.717	14.452	0.265	0.611	4.32	-0.251	3.02
12/20/2012	12:02:00	14.720	14.454	0.266	0.614	4.32	-0.254	3.04
12/20/2012	12:17:00	14.709	14.450	0.259	0.598	4.32	-0.238	2.85
12/20/2012	12:32:00	14.701	14.433	0.268	0.618	4.32	-0.258	3.10
12/20/2012	12:47:00	14.683	14.420	0.263	0.607	4.32	-0.247	2.96
12/20/2012	13:02:00	14.674	14.408	0.266	0.614	4.32	-0.254	3.04
12/20/2012	13:17:00	14.667	14.403	0.264	0.609	4.32	-0.249	2.99
12/20/2012	13:32:00	14.655	14.400	0.255	0.588	4.32	-0.228	2.74
12/20/2012	13:47:00	14.660	14.396	0.264	0.609	4.32	-0.249	2.99
12/20/2012	14:02:00	14.648	14.379	0.269	0.621	4.32	-0.261	3.13
12/20/2012	14:17:00	14.638	14.368	0.270	0.623	4.32	-0.263	3.15
12/20/2012	14:32:00	14.631	14.362	0.269	0.621	4.32	-0.261	3.13
12/20/2012	14:47:00	14.627	14.359	0.268	0.618	4.32	-0.258	3.10
12/20/2012	15:02:00	14.615	14.356	0.259	0.598	4.32	-0.238	2.85
12/20/2012	15:17:00	14.615	14.354	0.261	0.602	4.32	-0.242	2.91
12/20/2012	15:32:00	14.616	14.354	0.262	0.604	4.32	-0.244	2.93
12/20/2012	15:47:00	14.609	14.332	0.277	0.639	4.32	-0.279	3.35
12/20/2012	16:02:00	14.594	14.345	0.249	0.574	4.32	-0.214	2.57
12/20/2012	16:17:00	14.607	14.342	0.265	0.611	4.32	-0.251	3.02
12/20/2012	16:32:00	14.598	14.320	0.278	0.641	4.32	-0.281	3.38
12/20/2012	16:47:00	14.585	14.312	0.273	0.630	4.32	-0.270	3.24
12/20/2012	17:02:00	14.572	14.310	0.262	0.604	4.32	-0.244	2.93
12/20/2012	17:17:00	14.564	14.302	0.262	0.604	4.32	-0.244	2.93
12/20/2012	17:32:00	14.567	14.300	0.267	0.616	4.32	-0.256	3.07
12/20/2012	17:47:00	14.564	14.293	0.271	0.625	4.32	-0.265	3.18
12/20/2012	18:02:00	14.556	14.284	0.272	0.628	4.32	-0.268	3.21
12/20/2012	18:17:00	14.548	14.270	0.278	0.641	4.32	-0.281	3.38
12/20/2012	18:32:00	14.532	14.263	0.269	0.621	4.32	-0.261	3.13
12/20/2012	18:47:00	14.528	14.268	0.260	0.600	4.32	-0.240	2.88
12/20/2012	19:02:00	14.536	14.255	0.281	0.648	4.32	-0.288	3.46
12/20/2012	19:17:00	14.520	14.248	0.272	0.628	4.32	-0.268	3.21
12/20/2012	19:32:00	14.518	14.251	0.267	0.616	4.32	-0.256	3.07
12/20/2012	19:47:00	14.528	14.241	0.287	0.662	4.32	-0.302	3.63
12/20/2012	20:02:00	14.522	14.242	0.280	0.646	4.32	-0.286	3.43
12/20/2012	20:17:00	14.530	14.241	0.289	0.667	4.32	-0.307	3.68
12/20/2012	20:32:00	14.548	14.255	0.293	0.676	4.32	-0.316	3.79
12/20/2012	20:47:00	14.598	14.252	0.346	0.798	4.32	-0.438	5.26
12/20/2012	21:02:00	14.607	14.253	0.354	0.817	4.32	-0.457	5.48
12/20/2012	21:17:00	14.828	14.255	0.573	1.322	4.32	-0.962	11.54
12/20/2012	21:32:00	15.015	14.256	0.759	1.751	4.32	-1.391	16.69
12/20/2012	21:47:00	15.037	14.256	0.781	1.802	4.32	-1.442	17.30
12/20/2012	22:02:00	15.000	14.259	0.741	1.709	4.32	-1.349	16.19
12/20/2012	22:17:00	14.940	14.262	0.678	1.564	4.32	-1.204	14.45
12/20/2012	22:32:00	14.879	14.262	0.617	1.423	4.32	-1.063	12.76
12/20/2012	22:47:00	14.842	14.260	0.582	1.343	4.32	-0.983	11.79
12/20/2012	23:02:00	14.805	14.256	0.549	1.267	4.32	-0.907	10.88
12/20/2012	23:17:00	14.781	14.252	0.529	1.220	4.32	-0.860	10.32
12/20/2012	23:32:00	14.758	14.273	0.485	1.119	4.32	-0.759	9.11
12/20/2012	23:47:00	14.737	14.267	0.470	1.084	4.32	-0.724	8.69
12/21/2012	0:02:00	14.731	14.259	0.472	1.089	4.32	-0.729	8.75
12/21/2012	0:17:00	14.721	14.278	0.443	1.022	4.32	-0.662	7.94
12/21/2012	0:32:00	14.709	14.276	0.433	0.999	4.32	-0.639	7.67
12/21/2012	0:47:00	14.702	14.283	0.419	0.967	4.32	-0.607	7.28
12/21/2012	1:02:00	14.707	14.279	0.428	0.987	4.32	-0.627	7.53
12/21/2012	1:17:00	14.699	14.295	0.404	0.932	4.32	-0.572	6.86
12/21/2012	1:32:00	14.698	14.279	0.419	0.967	4.32	-0.607	7.28
12/21/2012	1:47:00	14.688	14.296	0.392	0.904	4.32	-0.544	6.53
12/21/2012	2:02:00	14.702	14.290	0.412	0.950	4.32	-0.590	7.09
12/21/2012	2:17:00	14.690	14.298	0.392	0.904	4.32	-0.544	6.53
12/21/2012	2:32:00	14.674	14.292	0.382	0.881	4.32	-0.521	6.26
12/21/2012	2:47:00	14.681	14.291	0.390	0.900	4.32	-0.540	6.48
12/21/2012	3:02:00	14.680	14.291	0.389	0.897	4.32	-0.537	6.45
12/21/2012	3:17:00	14.677	14.296	0.381	0.879	4.32	-0.519	6.23
12/21/2012	3:32:00	14.674	14.299	0.375	0.865	4.32	-0.505	6.06
12/21/2012	3:47:00	14.681	14.291	0.390	0.900	4.32	-0.540	6.48
12/21/2012	4:02:00	14.669	14.300	0.369	0.851	4.32	-0.491	5.90
12/21/2012	4:17:00	14.660	14.291	0.369	0.851	4.32	-0.491	5.90
12/21/2012	4:32:00	14.666	14.300	0.366	0.844	4.32	-0.484	5.81
12/21/2012	4:47:00	14.664	14.304	0.360	0.831	4.32	-0.471	5.65
12/21/2012	5:02:00	14.659	14.295	0.364	0.840	4.32	-0.480	5.76
12/21/2012	5:17:00	14.657	14.292	0.365	0.842	4.32	-0.482	5.78
12/21/2012	5:32:00	14.659	14.296	0.363	0.837	4.32	-0.477	5.73
12/21/2012	5:47:00	14.655	14.303	0.352	0.812	4.32	-0.452	5.42
12/21/2012	6:02:00	14.655	14.300	0.355	0.819	4.32	-0.459	5.51
12/21/2012	6:17:00	14.655	14.300	0.355	0.819	4.32	-0.459	5.51
12/21/2012	6:32:00	14.657	14.302	0.355	0.819	4.32	-0.459	5.51
12/21/2012	6:47:00	14.660	14.306	0.354	0.817	4.32	-0.457	5.48
12/21/2012	7:02:00	14.657	14.310	0.347	0.801	4.32	-0.441	5.29
12/21/2012	7:17:00	14.652	14.306	0.346	0.798	4.32	-0.438	5.26
12/21/2012	7:32:00	14.661	14.312	0.349	0.805	4.32	-0.445	5.34
12/21/2012	7:47:00	14.659	14.310	0.349	0.805	4.32	-0.445	5.34
12/21/2012	8:02:00	14.662	14.313	0.349	0.805	4.32	-0.445	5.34
12/21/2012	8:17:00	14.654	14.319	0.335	0.773	4.32	-0.413	4.95
12/21/2012	8:32:00	14.663	14.322	0.341	0.787	4.32	-0.427	5.12
12/21/2012	8:47:00	14.666	14.311	0.355	0.819	4.32	-0.459	5.51
12/21/2012	9:02:00	14.661	14.306	0.355	0.819	4.32	-0.459	5.51
12/21/2012	9:17:00	14.662	14.315	0.347	0.801	4.32	-0.441	5.29
12/21/2012	9:32:00	14.667	14.331	0.336	0.775	4.32	-0.415	4.98
12/21/2012	9:47:00	14.672	14.322	0.350	0.807	4.32	-0.447	5.37
12/21/2012	10:02:00	14.672	14.331	0.341	0.787	4.32	-0.427	5.12
12/21/2012	10:17:00	14.670	14.341	0.329	0.759	4.32	-0.399	4.79
12/21/2012	10:32:00	14.678	14.329	0.349	0.805	4.32	-0.445	5.34
12/21/2012	10:47:00	14.672	14.349	0.323	0.745	4.32	-0.385	4.62
12/21/2012	11:02:00	14.672	14.351	0.321	0.741	4.32	-0.381	4.57
12/21/2012	11:17:00	14.669	14.347	0.322	0.743	4.32	-0.383	4.59
12/21/2012	11:32:00	14.671	14.333	0.338	0.780	4.32	-0.420	5.04
12/21/2012	11:47:00	14.667	14.338	0.329	0.759	4.32	-0.399	4.79
12/21/2012	12:02:00	14.662	14.329	0.333	0.768	4.32	-0.408	4.90
12/21/2012	12:17:00	14.657	14.330	0.327	0.754	4.32	-0.394	4.73
12/21/2012	12:32:00	14.654	14.325	0.329	0.759	4.32	-0.399	4.79
12/21/2012	12:47:00	14.651	14.328	0.323	0.745	4.32	-0.385	4.62
12/21/2012	13:02:00	14.651	14.334	0.317	0.731	4.32	-0.371	4.46
12/21/2012	13:17:00	14.644	14.310	0.334	0.771	4.32	-0.411	4.93
12/21/2012	13:32:00	14.645	14.332	0.313	0.722	4.32	-0.362	4.35
12/21/2012	13:47:00	14.647	14.327	0.320	0.738	4.32	-0.378	4.54
12/21/2012	14:02:00	14.646	14.326	0.320	0.738	4.32	-0.378	4.54
12/21/2012	14:17:00	14.654	14.325	0.329	0.759	4.32	-0.399	4.79
12/21/2012	14:32:00	14.655	14.333	0.322	0.743	4.32	-0.383	4.59
12/21/2012	14:47:00	14.662	14.340	0.322	0.743	4.32	-0.383	4.59
12/21/2012	15:02:00	14.654	14.345	0.309	0.713	4.32	-0.353	4.23
12/21/2012	15:17:00	14.660	14.340	0.320	0.738	4.32	-0.378	4.54
12/21/2012	15:32:00	14.659	14.342	0.317	0.731	4.32	-0.371	4.46

12/21/2012	15:47:00	14.662	14.358	0.304	0.701	4.32	-0.341	4.10
12/21/2012	16:02:00	14.666	14.364	0.302	0.697	4.32	-0.337	4.04
12/21/2012	16:17:00	14.674	14.361	0.313	0.722	4.32	-0.362	4.35
12/21/2012	16:32:00	14.676	14.368	0.308	0.711	4.32	-0.351	4.21
12/21/2012	16:47:00	14.679	14.360	0.319	0.736	4.32	-0.376	4.51
12/21/2012	17:02:00	14.679	14.360	0.319	0.736	4.32	-0.376	4.51
12/21/2012	17:17:00	14.676	14.361	0.315	0.727	4.32	-0.367	4.40
12/21/2012	17:32:00	14.682	14.367	0.315	0.727	4.32	-0.367	4.40
12/21/2012	17:47:00	14.680	14.356	0.324	0.747	4.32	-0.387	4.65
12/21/2012	18:02:00	14.682	14.381	0.301	0.694	4.32	-0.334	4.01
12/21/2012	18:17:00	14.687	14.378	0.309	0.713	4.32	-0.353	4.23
12/21/2012	18:32:00	14.687	14.369	0.318	0.734	4.32	-0.374	4.48
12/21/2012	18:47:00	14.684	14.377	0.307	0.708	4.32	-0.348	4.18
12/21/2012	19:02:00	14.688	14.378	0.310	0.715	4.32	-0.355	4.26
12/21/2012	19:17:00	14.695	14.386	0.309	0.713	4.32	-0.353	4.23
12/21/2012	19:32:00	14.698	14.379	0.319	0.736	4.32	-0.376	4.51
12/21/2012	19:47:00	14.691	14.377	0.314	0.724	4.32	-0.364	4.37
12/21/2012	20:02:00	14.693	14.372	0.321	0.741	4.32	-0.381	4.57
12/21/2012	20:17:00	14.691	14.382	0.309	0.713	4.32	-0.353	4.23
12/21/2012	20:32:00	14.687	14.382	0.305	0.704	4.32	-0.344	4.12
12/21/2012	20:47:00	14.696	14.384	0.312	0.720	4.32	-0.360	4.32
12/21/2012	21:02:00	14.699	14.384	0.315	0.727	4.32	-0.367	4.40
12/21/2012	21:17:00	14.692	14.393	0.299	0.690	4.32	-0.330	3.96
12/21/2012	21:32:00	14.700	14.389	0.311	0.717	4.32	-0.357	4.29
12/21/2012	21:47:00	14.709	14.396	0.313	0.722	4.32	-0.362	4.35
12/21/2012	22:02:00	14.703	14.398	0.305	0.704	4.32	-0.344	4.12
12/21/2012	22:17:00	14.707	14.404	0.303	0.699	4.32	-0.339	4.07
12/21/2012	22:32:00	14.709	14.396	0.313	0.722	4.32	-0.362	4.35
12/21/2012	22:47:00	14.710	14.401	0.309	0.713	4.32	-0.353	4.23
12/21/2012	23:02:00	14.709	14.398	0.311	0.717	4.32	-0.357	4.29
12/21/2012	23:17:00	14.712	14.403	0.309	0.713	4.32	-0.353	4.23
12/21/2012	23:32:00	14.704	14.404	0.300	0.692	4.32	-0.332	3.99
12/21/2012	23:47:00	14.706	14.404	0.302	0.697	4.32	-0.337	4.04
12/22/2012	0:02:00	14.705	14.400	0.305	0.704	4.32	-0.344	4.12
12/22/2012	0:17:00	14.704	14.403	0.301	0.694	4.32	-0.334	4.01
12/22/2012	0:32:00	14.710	14.399	0.311	0.717	4.32	-0.357	4.29
12/22/2012	0:47:00	14.703	14.408	0.295	0.681	4.32	-0.321	3.85
12/22/2012	1:02:00	14.709	14.408	0.301	0.694	4.32	-0.334	4.01
12/22/2012	1:17:00	14.712	14.413	0.299	0.690	4.32	-0.330	3.96
12/22/2012	1:32:00	14.716	14.415	0.301	0.694	4.32	-0.334	4.01
12/22/2012	1:47:00	14.715	14.416	0.299	0.690	4.32	-0.330	3.96
12/22/2012	2:02:00	14.720	14.416	0.304	0.701	4.32	-0.341	4.10
12/22/2012	2:17:00	14.723	14.420	0.303	0.699	4.32	-0.339	4.07
12/22/2012	2:32:00	14.720	14.422	0.298	0.687	4.32	-0.327	3.93
12/22/2012	2:47:00	14.728	14.426	0.302	0.697	4.32	-0.337	4.04
12/22/2012	3:02:00	14.724	14.429	0.295	0.681	4.32	-0.321	3.85
12/22/2012	3:17:00	14.736	14.430	0.306	0.706	4.32	-0.346	4.15
12/22/2012	3:32:00	14.726	14.431	0.295	0.681	4.32	-0.321	3.85
12/22/2012	3:47:00	14.734	14.437	0.297	0.685	4.32	-0.325	3.90
12/22/2012	4:02:00	14.727	14.439	0.288	0.664	4.32	-0.304	3.65
12/22/2012	4:17:00	14.733	14.443	0.290	0.669	4.32	-0.309	3.71
12/22/2012	4:32:00	14.737	14.442	0.295	0.681	4.32	-0.321	3.85
12/22/2012	4:47:00	14.737	14.445	0.292	0.674	4.32	-0.314	3.76
12/22/2012	5:02:00	14.742	14.445	0.297	0.685	4.32	-0.325	3.90
12/22/2012	5:17:00	14.740	14.447	0.293	0.676	4.32	-0.316	3.79
12/22/2012	5:32:00	14.746	14.458	0.288	0.664	4.32	-0.304	3.65
12/22/2012	5:47:00	14.760	14.461	0.299	0.690	4.32	-0.330	3.96
12/22/2012	6:02:00	14.755	14.467	0.288	0.664	4.32	-0.304	3.65
12/22/2012	6:17:00	14.764	14.471	0.293	0.676	4.32	-0.316	3.79
12/22/2012	6:32:00	14.762	14.475	0.287	0.662	4.32	-0.302	3.63
12/22/2012	6:47:00	14.767	14.476	0.291	0.671	4.32	-0.311	3.74
12/22/2012	7:02:00	14.774	14.477	0.297	0.685	4.32	-0.325	3.90
12/22/2012	7:17:00	14.772	14.490	0.282	0.651	4.32	-0.291	3.49
12/22/2012	7:32:00	14.777	14.488	0.289	0.667	4.32	-0.307	3.68
12/22/2012	7:47:00	14.783	14.496	0.287	0.662	4.32	-0.302	3.63
12/22/2012	8:02:00	14.783	14.493	0.290	0.669	4.32	-0.309	3.71
12/22/2012	8:17:00	14.789	14.498	0.291	0.671	4.32	-0.311	3.74
12/22/2012	8:32:00	14.791	14.498	0.293	0.676	4.32	-0.316	3.79
12/22/2012	8:47:00	14.793	14.505	0.288	0.664	4.32	-0.304	3.65
12/22/2012	9:02:00	14.796	14.506	0.290	0.669	4.32	-0.309	3.71
12/22/2012	9:17:00	14.800	14.508	0.292	0.674	4.32	-0.314	3.76
12/22/2012	9:32:00	14.804	14.509	0.295	0.681	4.32	-0.321	3.85
12/22/2012	9:47:00	14.800	14.507	0.293	0.676	4.32	-0.316	3.79
12/22/2012	10:02:00	14.802	14.515	0.287	0.662	4.32	-0.302	3.63
12/22/2012	10:17:00	14.806	14.513	0.293	0.676	4.32	-0.316	3.79
12/22/2012	10:32:00	14.808	14.515	0.293	0.676	4.32	-0.316	3.79
12/22/2012	10:47:00	14.809	14.511	0.298	0.687	4.32	-0.327	3.93
12/22/2012	11:02:00	14.802	14.509	0.293	0.676	4.32	-0.316	3.79
12/22/2012	11:17:00	14.804	14.506	0.298	0.687	4.32	-0.327	3.93
12/22/2012	11:32:00	14.798	14.506	0.292	0.674	4.32	-0.314	3.76
12/22/2012	11:47:00	14.797	14.504	0.293	0.676	4.32	-0.316	3.79
12/22/2012	12:02:00	14.795	14.500	0.295	0.681	4.32	-0.321	3.85
12/22/2012	12:17:00	14.793	14.499	0.294	0.678	4.32	-0.318	3.82
12/22/2012	12:32:00	14.787	14.495	0.292	0.674	4.32	-0.314	3.76
12/22/2012	12:47:00	14.789	14.495	0.294	0.678	4.32	-0.318	3.82
12/22/2012	13:02:00	14.782	14.485	0.297	0.685	4.32	-0.325	3.90
12/22/2012	13:17:00	14.775	14.482	0.293	0.676	4.32	-0.316	3.79
12/22/2012	13:32:00	14.773	14.480	0.293	0.676	4.32	-0.316	3.79
12/22/2012	13:47:00	14.772	14.484	0.288	0.664	4.32	-0.304	3.65
12/22/2012	14:02:00	14.770	14.488	0.282	0.651	4.32	-0.291	3.49
12/22/2012	14:17:00	14.772	14.476	0.296	0.683	4.32	-0.323	3.87
12/22/2012	14:32:00	14.769	14.485	0.284	0.655	4.32	-0.295	3.54
12/22/2012	14:47:00	14.769	14.486	0.283	0.653	4.32	-0.293	3.51
12/22/2012	15:02:00	14.775	14.483	0.292	0.674	4.32	-0.314	3.76
12/22/2012	15:17:00	14.769	14.484	0.285	0.657	4.32	-0.297	3.57
12/22/2012	15:32:00	14.775	14.489	0.286	0.660	4.32	-0.300	3.60
12/22/2012	15:47:00	14.774	14.488	0.286	0.660	4.32	-0.300	3.60
12/22/2012	16:02:00	14.773	14.492	0.281	0.648	4.32	-0.288	3.46
12/22/2012	16:17:00	14.773	14.496	0.277	0.639	4.32	-0.279	3.35
12/22/2012	16:32:00	14.776	14.484	0.292	0.674	4.32	-0.314	3.76
12/22/2012	16:47:00	14.774	14.495	0.279	0.644	4.32	-0.284	3.40
12/22/2012	17:02:00	14.780	14.490	0.290	0.669	4.32	-0.309	3.71
12/22/2012	17:17:00	14.781	14.496	0.285	0.657	4.32	-0.297	3.57
12/22/2012	17:32:00	14.780	14.492	0.288	0.664	4.32	-0.304	3.65
12/22/2012	17:47:00	14.781	14.499	0.282	0.651	4.32	-0.291	3.49
12/22/2012	18:02:00	14.782	14.501	0.281	0.648	4.32	-0.288	3.46
12/22/2012	18:17:00	14.784	14.485	0.299	0.690	4.32	-0.330	3.96
12/22/2012	18:32:00	14.777	14.502	0.275	0.634	4.32	-0.274	3.29
12/22/2012	18:47:00	14.787	14.503	0.284	0.655	4.32	-0.295	3.54
12/22/2012	19:02:00	14.782	14.499	0.283	0.653	4.32	-0.293	3.51
12/22/2012	19:17:00	14.784	14.497	0.287	0.662	4.32	-0.302	3.63
12/22/2012	19:32:00	14.784	14.500	0.284	0.655	4.32	-0.295	3.54
12/22/2012	19:47:00	14.786	14.500	0.286	0.660	4.32	-0.300	3.60
12/22/2012	20:02:00	14.778	14.500	0.278	0.641	4.32	-0.281	3.38
12/22/2012	20:17:00	14.781	14.503	0.278	0.641	4.32	-0.281	3.38
12/22/2012	20:32:00	14.782	14.499	0.283	0.653	4.32	-0.293	3.51
12/22/2012	20:47:00	14.785	14.505	0.280	0.646	4.32	-0.286	3.43
12/22/2012	21:02:00	14.792	14.507	0.285	0.657	4.32	-0.297	3.57
12/22/2012	21:17:00	14.788	14.508	0.280	0.646	4.32	-0.286	3.43
12/22/2012	21:32:00	14.790	14.511	0.279	0.644	4.32	-0.284	3.40
12/22/2012	21:47:00	14.794	14.507	0.287	0.662	4.32	-0.302	3.63
12/22/2012	22:02:00	14.787	14.517	0.270	0.623	4.32	-0.263	3.15
12/22/2012	22:17:00	14.792	14.508	0.284	0.655	4.32	-0.295	3.54
12/22/2012	22:32:00	14.794	14.513	0.281	0.648	4.32	-0.288	3.46
12/22/2012	22:47:00	14.786	14.513	0.273	0.630	4.32	-0.270	3.24
12/22/2012	23:02:00	14.785	14.514	0.271	0.625	4.32	-0.265	3.18
12/22/2012	23:17:00	14.792	14.514	0.278	0.641	4.32	-0.281	3.38
12/22/2012	23:32:00	14.793	14.514	0.279	0.644	4.32	-0.284	3.40
12/22/2012	23:47:00	14.793	14.515	0.278	0.641	4.32	-0.281	3.38
12/23/2012	0:02:00	14.790	14.522	0.268	0.618	4.32	-0.258	3.10
12/23/2012	0:17:00	14.791	14.517	0.274	0.632	4.32	-0.272	3.27
12/23/2012	0:32:00	14.785	14.512	0.273	0.630	4.32	-0.270	3.24
12/23/2012	0:47:00	14.791	14.519	0.272	0.628	4.32	-0.268	3.21

12/23/2012	1:02:00	14.789	14.517	0.272	0.628	4.32	-0.268	3.21
12/23/2012	1:17:00	14.783	14.516	0.267	0.616	4.32	-0.256	3.07
12/23/2012	1:32:00	14.786	14.515	0.271	0.625	4.32	-0.265	3.18
12/23/2012	1:47:00	14.788	14.516	0.272	0.628	4.32	-0.268	3.21
12/23/2012	2:02:00	14.784	14.518	0.266	0.614	4.32	-0.254	3.04
12/23/2012	2:17:00	14.790	14.522	0.268	0.618	4.32	-0.258	3.10
12/23/2012	2:32:00	14.793	14.520	0.273	0.630	4.32	-0.270	3.24
12/23/2012	2:47:00	14.787	14.520	0.267	0.616	4.32	-0.256	3.07
12/23/2012	3:02:00	14.786	14.519	0.267	0.616	4.32	-0.256	3.07
12/23/2012	3:17:00	14.792	14.524	0.268	0.618	4.32	-0.258	3.10
12/23/2012	3:32:00	14.790	14.524	0.266	0.614	4.32	-0.254	3.04
12/23/2012	3:47:00	14.785	14.525	0.260	0.600	4.32	-0.240	2.88
12/23/2012	4:02:00	14.782	14.519	0.263	0.607	4.32	-0.247	2.96
12/23/2012	4:17:00	14.787	14.521	0.266	0.614	4.32	-0.254	3.04
12/23/2012	4:32:00	14.779	14.518	0.261	0.602	4.32	-0.242	2.91
12/23/2012	4:47:00	14.782	14.515	0.267	0.616	4.32	-0.256	3.07
12/23/2012	5:02:00	14.782	14.517	0.265	0.611	4.32	-0.251	3.02
12/23/2012	5:17:00	14.781	14.517	0.264	0.609	4.32	-0.249	2.99
12/23/2012	5:32:00	14.784	14.519	0.265	0.611	4.32	-0.251	3.02
12/23/2012	5:47:00	14.789	14.526	0.263	0.607	4.32	-0.247	2.96
12/23/2012	6:02:00	14.791	14.531	0.260	0.600	4.32	-0.240	2.88
12/23/2012	6:17:00	14.788	14.529	0.259	0.598	4.32	-0.238	2.85
12/23/2012	6:32:00	14.794	14.527	0.267	0.616	4.32	-0.256	3.07
12/23/2012	6:47:00	14.790	14.534	0.256	0.591	4.32	-0.231	2.77
12/23/2012	7:02:00	14.796	14.533	0.263	0.607	4.32	-0.247	2.96
12/23/2012	7:17:00	14.795	14.535	0.260	0.600	4.32	-0.240	2.88
12/23/2012	7:32:00	14.797	14.532	0.265	0.611	4.32	-0.251	3.02
12/23/2012	7:47:00	14.799	14.535	0.264	0.609	4.32	-0.249	2.99
12/23/2012	8:02:00	14.799	14.537	0.262	0.604	4.32	-0.244	2.93
12/23/2012	8:17:00	14.797	14.538	0.259	0.598	4.32	-0.238	2.85
12/23/2012	8:32:00	14.804	14.543	0.261	0.602	4.32	-0.242	2.91
12/23/2012	8:47:00	14.802	14.537	0.265	0.611	4.32	-0.251	3.02
12/23/2012	9:02:00	14.801	14.538	0.263	0.607	4.32	-0.247	2.96
12/23/2012	9:17:00	14.808	14.534	0.274	0.632	4.32	-0.272	3.27
12/23/2012	9:32:00	14.803	14.538	0.265	0.611	4.32	-0.251	3.02
12/23/2012	9:47:00	14.808	14.540	0.268	0.618	4.32	-0.258	3.10
12/23/2012	10:02:00	14.806	14.537	0.269	0.621	4.32	-0.261	3.13
12/23/2012	10:17:00	14.803	14.533	0.270	0.623	4.32	-0.263	3.15
12/23/2012	10:32:00	14.801	14.527	0.274	0.632	4.32	-0.272	3.27
12/23/2012	10:47:00	14.799	14.528	0.271	0.625	4.32	-0.265	3.18
12/23/2012	11:02:00	14.796	14.523	0.273	0.630	4.32	-0.270	3.24
12/23/2012	11:17:00	14.796	14.517	0.279	0.644	4.32	-0.284	3.40
12/23/2012	11:32:00	14.785	14.515	0.270	0.623	4.32	-0.263	3.15
12/23/2012	11:47:00	14.786	14.506	0.280	0.646	4.32	-0.286	3.43
12/23/2012	12:02:00	14.773	14.500	0.273	0.630	4.32	-0.270	3.24
12/23/2012	12:17:00	14.769	14.495	0.274	0.632	4.32	-0.272	3.27
12/23/2012	12:32:00	14.768	14.493	0.275	0.634	4.32	-0.274	3.29
12/23/2012	12:47:00	14.762	14.497	0.265	0.611	4.32	-0.251	3.02
12/23/2012	13:02:00	14.763	14.492	0.271	0.625	4.32	-0.265	3.18
12/23/2012	13:17:00	14.758	14.483	0.275	0.634	4.32	-0.274	3.29
12/23/2012	13:32:00	14.752	14.479	0.273	0.630	4.32	-0.270	3.24
12/23/2012	13:47:00	14.750	14.484	0.266	0.614	4.32	-0.254	3.04
12/23/2012	14:02:00	14.749	14.481	0.268	0.618	4.32	-0.258	3.10
12/23/2012	14:17:00	14.745	14.481	0.264	0.609	4.32	-0.249	2.99
12/23/2012	14:32:00	14.751	14.478	0.273	0.630	4.32	-0.270	3.24
12/23/2012	14:47:00	14.741	14.476	0.265	0.611	4.32	-0.251	3.02
12/23/2012	15:02:00	14.741	14.472	0.269	0.621	4.32	-0.261	3.13
12/23/2012	15:17:00	14.740	14.475	0.265	0.611	4.32	-0.251	3.02
12/23/2012	15:32:00	14.736	14.476	0.260	0.600	4.32	-0.240	2.88
12/23/2012	15:47:00	14.737	14.472	0.265	0.611	4.32	-0.251	3.02
12/23/2012	16:02:00	14.741	14.467	0.274	0.632	4.32	-0.272	3.27
12/23/2012	16:17:00	14.737	14.479	0.258	0.595	4.32	-0.235	2.82
12/23/2012	16:32:00	14.742	14.476	0.266	0.614	4.32	-0.254	3.04
12/23/2012	16:47:00	14.745	14.476	0.269	0.621	4.32	-0.261	3.13
12/23/2012	17:02:00	14.744	14.481	0.263	0.607	4.32	-0.247	2.96
12/23/2012	17:17:00	14.737	14.479	0.258	0.595	4.32	-0.235	2.82
12/23/2012	17:32:00	14.742	14.479	0.263	0.607	4.32	-0.247	2.96
12/23/2012	17:47:00	14.743	14.476	0.267	0.616	4.32	-0.256	3.07
12/23/2012	18:02:00	14.746	14.481	0.265	0.611	4.32	-0.251	3.02
12/23/2012	18:17:00	14.751	14.490	0.261	0.602	4.32	-0.242	2.91
12/23/2012	18:32:00	14.754	14.483	0.271	0.625	4.32	-0.265	3.18
12/23/2012	18:47:00	14.752	14.479	0.273	0.630	4.32	-0.270	3.24
12/23/2012	19:02:00	14.744	14.480	0.264	0.609	4.32	-0.249	2.99
12/23/2012	19:17:00	14.752	14.485	0.267	0.616	4.32	-0.256	3.07
12/23/2012	19:32:00	14.747	14.483	0.264	0.609	4.32	-0.249	2.99
12/23/2012	19:47:00	14.746	14.478	0.268	0.618	4.32	-0.258	3.10
12/23/2012	20:02:00	14.744	14.487	0.257	0.593	4.32	-0.233	2.79
12/23/2012	20:17:00	14.743	14.484	0.259	0.598	4.32	-0.238	2.85
12/23/2012	20:32:00	14.754	14.487	0.267	0.616	4.32	-0.256	3.07
12/23/2012	20:47:00	14.748	14.493	0.255	0.588	4.32	-0.228	2.74
12/23/2012	21:02:00	14.755	14.477	0.278	0.641	4.32	-0.281	3.38
12/23/2012	21:17:00	14.748	14.493	0.255	0.588	4.32	-0.228	2.74
12/23/2012	21:32:00	14.754	14.483	0.271	0.625	4.32	-0.265	3.18
12/23/2012	21:47:00	14.748	14.487	0.261	0.602	4.32	-0.242	2.91
12/23/2012	22:02:00	14.746	14.486	0.260	0.600	4.32	-0.240	2.88
12/23/2012	22:17:00	14.748	14.488	0.260	0.600	4.32	-0.240	2.88
12/23/2012	22:32:00	14.754	14.486	0.268	0.618	4.32	-0.258	3.10
12/23/2012	22:47:00	14.757	14.487	0.270	0.623	4.32	-0.263	3.15
12/23/2012	23:02:00	14.756	14.491	0.265	0.611	4.32	-0.251	3.02
12/23/2012	23:17:00	14.751	14.487	0.264	0.609	4.32	-0.249	2.99
12/23/2012	23:32:00	14.756	14.486	0.270	0.623	4.32	-0.263	3.15
12/23/2012	23:47:00	14.751	14.483	0.268	0.618	4.32	-0.258	3.10
12/24/2012	0:02:00	14.747	14.485	0.262	0.604	4.32	-0.244	2.93
12/24/2012	0:17:00	14.749	14.481	0.268	0.618	4.32	-0.258	3.10
12/24/2012	0:32:00	14.746	14.481	0.265	0.611	4.32	-0.251	3.02
12/24/2012	0:47:00	14.743	14.478	0.265	0.611	4.32	-0.251	3.02
12/24/2012	1:02:00	14.742	14.475	0.267	0.616	4.32	-0.256	3.07
12/24/2012	1:17:00	14.740	14.475	0.265	0.611	4.32	-0.251	3.02
12/24/2012	1:32:00	14.733	14.470	0.263	0.607	4.32	-0.247	2.96
12/24/2012	1:47:00	14.736	14.466	0.270	0.623	4.32	-0.263	3.15
12/24/2012	2:02:00	14.737	14.482	0.255	0.588	4.32	-0.228	2.74
12/24/2012	2:17:00	14.738	14.465	0.273	0.630	4.32	-0.270	3.24
12/24/2012	2:32:00	14.737	14.458	0.279	0.644	4.32	-0.284	3.40
12/24/2012	2:47:00	14.739	14.474	0.265	0.611	4.32	-0.251	3.02
12/24/2012	3:02:00	14.739	14.459	0.280	0.646	4.32	-0.286	3.43
12/24/2012	3:17:00	14.729	14.472	0.257	0.593	4.32	-0.233	2.79
12/24/2012	3:32:00	14.733	14.481	0.252	0.581	4.32	-0.221	2.66
12/24/2012	3:47:00	14.733	14.453	0.280	0.646	4.32	-0.286	3.43
12/24/2012	4:02:00	14.728	14.460	0.268	0.618	4.32	-0.258	3.10
12/24/2012	4:17:00	14.725	14.451	0.274	0.632	4.32	-0.272	3.27
12/24/2012	4:32:00	14.729	14.456	0.273	0.630	4.32	-0.270	3.24
12/24/2012	4:47:00	14.724	14.458	0.266	0.614	4.32	-0.254	3.04
12/24/2012	5:02:00	14.720	14.461	0.259	0.598	4.32	-0.238	2.85
12/24/2012	5:17:00	14.721	14.457	0.264	0.609	4.32	-0.249	2.99
12/24/2012	5:32:00	14.723	14.457	0.266	0.614	4.32	-0.254	3.04
12/24/2012	5:47:00	14.724	14.452	0.272	0.628	4.32	-0.268	3.21
12/24/2012	6:02:00	14.723	14.462	0.261	0.602	4.32	-0.242	2.91
12/24/2012	6:17:00	14.724	14.468	0.256	0.591	4.32	-0.231	2.77
12/24/2012	6:32:00	14.732	14.464	0.268	0.618	4.32	-0.258	3.10
12/24/2012	6:47:00	14.729	14.450	0.279	0.644	4.32	-0.284	3.40
12/24/2012	7:02:00	14.726	14.459	0.267	0.616	4.32	-0.256	3.07
12/24/2012	7:17:00	14.729	14.460	0.269	0.621	4.32	-0.261	3.13
12/24/2012	7:32:00	14.719	14.459	0.260	0.600	4.32	-0.240	2.88
12/24/2012	7:47:00	14.722	14.455	0.267	0.616	4.32	-0.256	3.07
12/24/2012	8:02:00	14.728	14.475	0.253	0.584	4.32	-0.224	2.68
12/24/2012	8:17:00	14.726	14.454	0.272	0.628	4.32	-0.268	3.21
12/24/2012	8:32:00	14.726	14.463	0.263	0.607	4.32	-0.247	2.96
12/24/2012	8:47:00	14.729	14.464	0.265	0.611	4.32	-0.251	3.02
12/24/2012	9:02:00	14.733	14.467	0.266	0.614	4.32	-0.254	3.04
12/24/2012	9:17:00	14.730	14.467	0.263	0.607	4.32	-0.247	2.96
12/24/2012	9:32:00	14.729	14.465	0.264	0.609	4.32	-0.249	2.99
12/24/2012	9:47:00	14.731	14.463	0.268	0.618	4.32	-0.258	3.10
12/24/2012	10:02:00	14.726	14.459	0.267	0.616	4.32	-0.256	3.07

12/24/2012	10:17:00	14.726	14.460	0.266	0.614	4.32	-0.254	3.04
12/24/2012	10:32:00	14.727	14.461	0.266	0.614	4.32	-0.254	3.04
12/24/2012	10:47:00	14.728	14.461	0.267	0.616	4.32	-0.256	3.07
12/24/2012	11:02:00	14.720	14.456	0.264	0.609	4.32	-0.249	2.99
12/24/2012	11:17:00	14.714	14.450	0.264	0.609	4.32	-0.249	2.99
12/24/2012	11:32:00	14.715	14.451	0.264	0.609	4.32	-0.249	2.99
12/24/2012	11:47:00	14.710	14.436	0.274	0.632	4.32	-0.272	3.27
12/24/2012	12:02:00	14.708	14.445	0.263	0.607	4.32	-0.247	2.96
12/24/2012	12:17:00	14.714	14.449	0.265	0.611	4.32	-0.251	3.02
12/24/2012	12:32:00	14.713	14.449	0.264	0.609	4.32	-0.249	2.99
12/24/2012	12:47:00	14.711	14.452	0.259	0.598	4.32	-0.238	2.85
12/24/2012	13:02:00	14.713	14.440	0.273	0.630	4.32	-0.270	3.24
12/24/2012	13:17:00	14.699	14.429	0.270	0.623	4.32	-0.263	3.15
12/24/2012	13:32:00	14.691	14.421	0.270	0.623	4.32	-0.263	3.15
12/24/2012	13:47:00	14.691	14.418	0.273	0.630	4.32	-0.270	3.24
12/24/2012	14:02:00	14.680	14.414	0.266	0.614	4.32	-0.254	3.04
12/24/2012	14:17:00	14.688	14.419	0.269	0.621	4.32	-0.261	3.13
12/24/2012	14:32:00	14.683	14.422	0.261	0.602	4.32	-0.242	2.91
12/24/2012	14:47:00	14.693	14.423	0.270	0.623	4.32	-0.263	3.15
12/24/2012	15:02:00	14.694	14.426	0.268	0.618	4.32	-0.258	3.10
12/24/2012	15:17:00	14.691	14.420	0.271	0.625	4.32	-0.265	3.18
12/24/2012	15:32:00	14.692	14.419	0.273	0.630	4.32	-0.270	3.24
12/24/2012	15:47:00	14.690	14.416	0.274	0.632	4.32	-0.272	3.27
12/24/2012	16:02:00	14.692	14.417	0.275	0.634	4.32	-0.274	3.29
12/24/2012	16:17:00	14.694	14.413	0.281	0.648	4.32	-0.288	3.46
12/24/2012	16:32:00	14.701	14.413	0.288	0.664	4.32	-0.304	3.65
12/24/2012	16:47:00	14.707	14.411	0.296	0.683	4.32	-0.323	3.87
12/24/2012	17:02:00	14.707	14.407	0.300	0.692	4.32	-0.332	3.99
12/24/2012	17:17:00	14.708	14.412	0.296	0.683	4.32	-0.323	3.87
12/24/2012	17:32:00	14.717	14.418	0.299	0.690	4.32	-0.330	3.96
12/24/2012	17:47:00	14.719	14.413	0.306	0.706	4.32	-0.346	4.15
12/24/2012	18:02:00	14.715	14.415	0.300	0.692	4.32	-0.332	3.99
12/24/2012	18:17:00	14.715	14.418	0.297	0.685	4.32	-0.325	3.90
12/24/2012	18:32:00	14.712	14.419	0.293	0.676	4.32	-0.316	3.79
12/24/2012	18:47:00	14.708	14.421	0.287	0.662	4.32	-0.302	3.63
12/24/2012	19:02:00	14.716	14.421	0.295	0.681	4.32	-0.321	3.85
12/24/2012	19:17:00	14.711	14.419	0.292	0.674	4.32	-0.314	3.76
12/24/2012	19:32:00	14.711	14.425	0.286	0.660	4.32	-0.300	3.60
12/24/2012	19:47:00	14.715	14.424	0.291	0.671	4.32	-0.311	3.74
12/24/2012	20:02:00	14.711	14.424	0.287	0.662	4.32	-0.302	3.63
12/24/2012	20:17:00	14.711	14.425	0.286	0.660	4.32	-0.300	3.60
12/24/2012	20:32:00	14.707	14.421	0.286	0.660	4.32	-0.300	3.60
12/24/2012	20:47:00	14.712	14.421	0.291	0.671	4.32	-0.311	3.74
12/24/2012	21:02:00	14.704	14.422	0.282	0.651	4.32	-0.291	3.49
12/24/2012	21:17:00	14.709	14.427	0.282	0.651	4.32	-0.291	3.49
12/24/2012	21:32:00	14.713	14.429	0.284	0.655	4.32	-0.295	3.54
12/24/2012	21:47:00	14.712	14.434	0.278	0.641	4.32	-0.281	3.38
12/24/2012	22:02:00	14.711	14.431	0.280	0.646	4.32	-0.286	3.43
12/24/2012	22:17:00	14.711	14.425	0.286	0.660	4.32	-0.300	3.60
12/24/2012	22:32:00	14.708	14.422	0.286	0.660	4.32	-0.300	3.60
12/24/2012	22:47:00	14.707	14.428	0.279	0.644	4.32	-0.284	3.40
12/24/2012	23:02:00	14.712	14.430	0.282	0.651	4.32	-0.291	3.49
12/24/2012	23:17:00	14.704	14.428	0.276	0.637	4.32	-0.277	3.32
12/24/2012	23:32:00	14.712	14.436	0.276	0.637	4.32	-0.277	3.32
12/24/2012	23:47:00	14.708	14.433	0.275	0.634	4.32	-0.274	3.29
12/25/2012	0:02:00	14.711	14.425	0.286	0.660	4.32	-0.300	3.60
12/25/2012	0:17:00	14.704	14.426	0.278	0.641	4.32	-0.281	3.38
12/25/2012	0:32:00	14.708	14.429	0.279	0.644	4.32	-0.284	3.40
12/25/2012	0:47:00	14.704	14.428	0.276	0.637	4.32	-0.277	3.32
12/25/2012	1:02:00	14.705	14.431	0.274	0.632	4.32	-0.272	3.27
12/25/2012	1:17:00	14.710	14.427	0.283	0.653	4.32	-0.293	3.51
12/25/2012	1:32:00	14.704	14.429	0.275	0.634	4.32	-0.274	3.29
12/25/2012	1:47:00	14.712	14.431	0.281	0.648	4.32	-0.288	3.46
12/25/2012	2:02:00	14.708	14.430	0.278	0.641	4.32	-0.281	3.38
12/25/2012	2:17:00	14.707	14.435	0.272	0.628	4.32	-0.268	3.21
12/25/2012	2:32:00	14.709	14.435	0.274	0.632	4.32	-0.272	3.27
12/25/2012	2:47:00	14.708	14.435	0.273	0.630	4.32	-0.270	3.24
12/25/2012	3:02:00	14.712	14.438	0.274	0.632	4.32	-0.272	3.27
12/25/2012	3:17:00	14.709	14.445	0.264	0.609	4.32	-0.249	2.99
12/25/2012	3:32:00	14.714	14.444	0.270	0.623	4.32	-0.263	3.15
12/25/2012	3:47:00	14.716	14.443	0.273	0.630	4.32	-0.270	3.24
12/25/2012	4:02:00	14.716	14.446	0.270	0.623	4.32	-0.263	3.15
12/25/2012	4:17:00	14.720	14.447	0.273	0.630	4.32	-0.270	3.24
12/25/2012	4:32:00	14.722	14.449	0.273	0.630	4.32	-0.270	3.24
12/25/2012	4:47:00	14.719	14.451	0.268	0.618	4.32	-0.258	3.10
12/25/2012	5:02:00	14.721	14.446	0.275	0.634	4.32	-0.274	3.29
12/25/2012	5:17:00	14.720	14.450	0.270	0.623	4.32	-0.263	3.15
12/25/2012	5:32:00	14.727	14.453	0.274	0.632	4.32	-0.272	3.27
12/25/2012	5:47:00	14.729	14.456	0.273	0.630	4.32	-0.270	3.24
12/25/2012	6:02:00	14.733	14.454	0.279	0.644	4.32	-0.284	3.40
12/25/2012	6:17:00	14.731	14.464	0.267	0.616	4.32	-0.256	3.07
12/25/2012	6:32:00	14.735	14.466	0.269	0.621	4.32	-0.261	3.13
12/25/2012	6:47:00	14.740	14.469	0.271	0.625	4.32	-0.265	3.18
12/25/2012	7:02:00	14.743	14.475	0.268	0.618	4.32	-0.258	3.10
12/25/2012	7:17:00	14.748	14.477	0.271	0.625	4.32	-0.265	3.18
12/25/2012	7:32:00	14.755	14.487	0.268	0.618	4.32	-0.258	3.10
12/25/2012	7:47:00	14.756	14.481	0.275	0.634	4.32	-0.274	3.29
12/25/2012	8:02:00	14.761	14.487	0.274	0.632	4.32	-0.272	3.27
12/25/2012	8:17:00	14.758	14.484	0.274	0.632	4.32	-0.272	3.27
12/25/2012	8:32:00	14.755	14.484	0.271	0.625	4.32	-0.265	3.18
12/25/2012	8:47:00	14.755	14.490	0.265	0.611	4.32	-0.251	3.02
12/25/2012	9:02:00	14.755	14.491	0.264	0.609	4.32	-0.249	2.99
12/25/2012	9:17:00	14.765	14.492	0.273	0.630	4.32	-0.270	3.24
12/25/2012	9:32:00	14.760	14.491	0.269	0.621	4.32	-0.261	3.13
12/25/2012	9:47:00	14.765	14.501	0.264	0.609	4.32	-0.249	2.99
12/25/2012	10:02:00	14.766	14.493	0.273	0.630	4.32	-0.270	3.24
12/25/2012	10:17:00	14.767	14.502	0.265	0.611	4.32	-0.251	3.02
12/25/2012	10:32:00	14.770	14.497	0.273	0.630	4.32	-0.270	3.24
12/25/2012	10:47:00	14.767	14.490	0.277	0.639	4.32	-0.279	3.35
12/25/2012	11:02:00	14.768	14.496	0.272	0.628	4.32	-0.268	3.21
12/25/2012	11:17:00	14.765	14.495	0.270	0.623	4.32	-0.263	3.15
12/25/2012	11:32:00	14.761	14.489	0.272	0.628	4.32	-0.268	3.21
12/25/2012	11:47:00	14.749	14.492	0.257	0.593	4.32	-0.233	2.79
12/25/2012	12:02:00	14.751	14.482	0.269	0.621	4.32	-0.261	3.13
12/25/2012	12:17:00	14.748	14.485	0.263	0.607	4.32	-0.247	2.96
12/25/2012	12:32:00	14.749	14.476	0.273	0.630	4.32	-0.270	3.24
12/25/2012	12:47:00	14.745	14.468	0.277	0.639	4.32	-0.279	3.35
12/25/2012	13:02:00	14.739	14.471	0.268	0.618	4.32	-0.258	3.10
12/25/2012	13:17:00	14.740	14.477	0.263	0.607	4.32	-0.247	2.96
12/25/2012	13:32:00	14.743	14.467	0.276	0.637	4.32	-0.277	3.32
12/25/2012	13:47:00	14.742	14.468	0.274	0.632	4.32	-0.272	3.27
12/25/2012	14:02:00	14.743	14.477	0.266	0.614	4.32	-0.254	3.04
12/25/2012	14:17:00	14.748	14.479	0.269	0.621	4.32	-0.261	3.13
12/25/2012	14:32:00	14.745	14.474	0.271	0.625	4.32	-0.265	3.18
12/25/2012	14:47:00	14.737	14.469	0.268	0.618	4.32	-0.258	3.10
12/25/2012	15:02:00	14.743	14.467	0.276	0.637	4.32	-0.277	3.32
12/25/2012	15:17:00	14.734	14.463	0.271	0.625	4.32	-0.265	3.18
12/25/2012	15:32:00	14.733	14.469	0.264	0.609	4.32	-0.249	2.99
12/25/2012	15:47:00	14.737	14.466	0.271	0.625	4.32	-0.265	3.18
12/25/2012	16:02:00	14.737	14.475	0.262	0.604	4.32	-0.244	2.93
12/25/2012	16:17:00	14.728	14.461	0.267	0.616	4.32	-0.256	3.07
12/25/2012	16:32:00	14.733	14.463	0.270	0.623	4.32	-0.263	3.15
12/25/2012	16:47:00	14.733	14.465	0.268	0.618	4.32	-0.258	3.10
12/25/2012	17:02:00	14.730	14.465	0.265	0.611	4.32	-0.251	3.02
12/25/2012	17:17:00	14.731	14.464	0.267	0.616	4.32	-0.256	3.07
12/25/2012	17:32:00	14.734	14.467	0.267	0.616	4.32	-0.256	3.07
12/25/2012	17:47:00	14.728	14.467	0.261	0.602	4.32	-0.242	2.91
12/25/2012	18:02:00	14.737	14.465	0.272	0.628	4.32	-0.268	3.21
12/25/2012	18:17:00	14.729	14.464	0.265	0.611	4.32	-0.251	3.02
12/25/2012	18:32:00	14.742	14.469	0.273	0.630	4.32	-0.270	3.24
12/25/2012	18:47:00	14.744	14.491	0.253	0.584	4.32	-0.224	2.68
12/25/2012	19:02:00	14.751	14.479	0.272	0.628	4.32	-0.268	3.21
12/25/2012	19:17:00	14.749	14.477	0.272	0.628	4.32	-0.268	3.21

12/25/2012	19:32:00	14.746	14.483	0.263	0.607	4.32	-0.247	2.96
12/25/2012	19:47:00	14.749	14.479	0.270	0.623	4.32	-0.263	3.15
12/25/2012	20:02:00	14.741	14.470	0.271	0.625	4.32	-0.265	3.18
12/25/2012	20:17:00	14.742	14.482	0.260	0.600	4.32	-0.240	2.88
12/25/2012	20:32:00	14.748	14.490	0.258	0.595	4.32	-0.235	2.82
12/25/2012	20:47:00	14.744	14.467	0.277	0.639	4.32	-0.279	3.35
12/25/2012	21:02:00	14.737	14.467	0.270	0.623	4.32	-0.263	3.15
12/25/2012	21:17:00	14.731	14.467	0.264	0.609	4.32	-0.249	2.99
12/25/2012	21:32:00	14.727	14.463	0.264	0.609	4.32	-0.249	2.99
12/25/2012	21:47:00	14.725	14.456	0.269	0.621	4.32	-0.261	3.13
12/25/2012	22:02:00	14.725	14.454	0.271	0.625	4.32	-0.265	3.18
12/25/2012	22:17:00	14.724	14.464	0.260	0.600	4.32	-0.240	2.88
12/25/2012	22:32:00	14.726	14.452	0.274	0.632	4.32	-0.272	3.27
12/25/2012	22:47:00	14.715	14.446	0.269	0.621	4.32	-0.261	3.13
12/25/2012	23:02:00	14.714	14.442	0.272	0.628	4.32	-0.268	3.21
12/25/2012	23:17:00	14.708	14.444	0.264	0.609	4.32	-0.249	2.99
12/25/2012	23:32:00	14.710	14.451	0.259	0.598	4.32	-0.238	2.85
12/25/2012	23:47:00	14.716	14.449	0.267	0.616	4.32	-0.256	3.07
12/26/2012	0:02:00	14.712	14.444	0.268	0.618	4.32	-0.258	3.10
12/26/2012	0:17:00	14.715	14.443	0.272	0.628	4.32	-0.268	3.21
12/26/2012	0:32:00	14.712	14.440	0.272	0.628	4.32	-0.268	3.21
12/26/2012	0:47:00	14.701	14.435	0.266	0.614	4.32	-0.254	3.04
12/26/2012	1:02:00	14.705	14.437	0.268	0.618	4.32	-0.258	3.10
12/26/2012	1:17:00	14.703	14.434	0.269	0.621	4.32	-0.261	3.13
12/26/2012	1:32:00	14.693	14.426	0.267	0.616	4.32	-0.256	3.07
12/26/2012	1:47:00	14.692	14.424	0.268	0.618	4.32	-0.258	3.10
12/26/2012	2:02:00	14.690	14.415	0.275	0.634	4.32	-0.274	3.29
12/26/2012	2:17:00	14.688	14.419	0.269	0.621	4.32	-0.261	3.13
12/26/2012	2:32:00	14.690	14.416	0.274	0.632	4.32	-0.272	3.27
12/26/2012	2:47:00	14.679	14.413	0.266	0.614	4.32	-0.254	3.04
12/26/2012	3:02:00	14.679	14.403	0.276	0.637	4.32	-0.277	3.32
12/26/2012	3:17:00	14.662	14.404	0.258	0.595	4.32	-0.235	2.82
12/26/2012	3:32:00	14.656	14.388	0.268	0.618	4.32	-0.258	3.10
12/26/2012	3:47:00	14.659	14.377	0.282	0.651	4.32	-0.291	3.49
12/26/2012	4:02:00	14.653	14.397	0.256	0.591	4.32	-0.231	2.77
12/26/2012	4:17:00	14.644	14.377	0.267	0.616	4.32	-0.256	3.07
12/26/2012	4:32:00	14.638	14.367	0.271	0.625	4.32	-0.265	3.18
12/26/2012	4:47:00	14.634	14.351	0.283	0.653	4.32	-0.293	3.51
12/26/2012	5:02:00	14.618	14.346	0.272	0.628	4.32	-0.268	3.21
12/26/2012	5:17:00	14.620	14.353	0.267	0.616	4.32	-0.256	3.07
12/26/2012	5:32:00	14.616	14.344	0.272	0.628	4.32	-0.268	3.21
12/26/2012	5:47:00	14.618	14.349	0.269	0.621	4.32	-0.261	3.13
12/26/2012	6:02:00	14.621	14.338	0.283	0.653	4.32	-0.293	3.51
12/26/2012	6:17:00	14.612	14.344	0.268	0.618	4.32	-0.258	3.10
12/26/2012	6:32:00	14.617	14.345	0.272	0.628	4.32	-0.268	3.21
12/26/2012	6:47:00	14.614	14.343	0.271	0.625	4.32	-0.265	3.18
12/26/2012	7:02:00	14.627	14.338	0.289	0.667	4.32	-0.307	3.68
12/26/2012	7:17:00	14.636	14.331	0.305	0.704	4.32	-0.344	4.12
12/26/2012	7:32:00	14.642	14.313	0.329	0.759	4.32	-0.399	4.79
12/26/2012	7:47:00	14.704	14.309	0.395	0.911	4.32	-0.551	6.62
12/26/2012	8:02:00	14.858	14.299	0.559	1.290	4.32	-0.930	11.16
12/26/2012	8:17:00	15.000	14.296	0.704	1.624	4.32	-1.264	15.17
12/26/2012	8:32:00	15.099	14.287	0.812	1.873	4.32	-1.513	18.16
12/26/2012	8:47:00	15.138	14.287	0.851	1.963	4.32	-1.603	19.24
12/26/2012	9:02:00	15.150	14.273	0.877	2.023	4.32	-1.663	19.96
12/26/2012	9:17:00	15.149	14.262	0.887	2.046	4.32	-1.686	20.24
12/26/2012	9:32:00	15.110	14.255	0.855	1.972	4.32	-1.612	19.35
12/26/2012	9:47:00	15.073	14.235	0.838	1.933	4.32	-1.573	18.88
12/26/2012	10:02:00	15.035	14.238	0.797	1.839	4.32	-1.479	17.74
12/26/2012	10:17:00	14.982	14.239	0.743	1.714	4.32	-1.354	16.25
12/26/2012	10:32:00	14.948	14.251	0.697	1.608	4.32	-1.248	14.98
12/26/2012	10:47:00	14.937	14.246	0.691	1.594	4.32	-1.234	14.81
12/26/2012	11:02:00	14.912	14.244	0.668	1.541	4.32	-1.181	14.17
12/26/2012	11:17:00	14.885	14.232	0.653	1.506	4.32	-1.146	13.76
12/26/2012	11:32:00	14.853	14.232	0.621	1.433	4.32	-1.073	12.87
12/26/2012	11:47:00	14.845	14.225	0.620	1.430	4.32	-1.070	12.84
12/26/2012	12:02:00	14.812	14.225	0.587	1.354	4.32	-0.994	11.93
12/26/2012	12:17:00	14.794	14.207	0.587	1.354	4.32	-0.994	11.93
12/26/2012	12:32:00	14.773	14.197	0.576	1.329	4.32	-0.969	11.63
12/26/2012	12:47:00	14.752	14.193	0.559	1.290	4.32	-0.930	11.16
12/26/2012	13:02:00	14.738	14.194	0.544	1.255	4.32	-0.895	10.74
12/26/2012	13:17:00	14.733	14.194	0.539	1.243	4.32	-0.883	10.60
12/26/2012	13:32:00	14.725	14.193	0.532	1.227	4.32	-0.867	10.41
12/26/2012	13:47:00	14.715	14.187	0.528	1.218	4.32	-0.858	10.30
12/26/2012	14:02:00	14.704	14.185	0.519	1.197	4.32	-0.837	10.05
12/26/2012	14:17:00	14.702	14.192	0.510	1.177	4.32	-0.817	9.80
12/26/2012	14:32:00	14.697	14.186	0.511	1.179	4.32	-0.819	9.83
12/26/2012	14:47:00	14.697	14.185	0.512	1.181	4.32	-0.821	9.85
12/26/2012	15:02:00	14.692	14.191	0.501	1.156	4.32	-0.796	9.55
12/26/2012	15:17:00	14.688	14.193	0.495	1.142	4.32	-0.782	9.38
12/26/2012	15:32:00	14.686	14.198	0.488	1.126	4.32	-0.766	9.19
12/26/2012	15:47:00	14.686	14.201	0.485	1.119	4.32	-0.759	9.11
12/26/2012	16:02:00	14.690	14.202	0.488	1.126	4.32	-0.766	9.19
12/26/2012	16:17:00	14.688	14.211	0.477	1.100	4.32	-0.740	8.89
12/26/2012	16:32:00	14.687	14.209	0.478	1.103	4.32	-0.743	8.91
12/26/2012	16:47:00	14.690	14.219	0.471	1.087	4.32	-0.727	8.72
12/26/2012	17:02:00	14.699	14.221	0.478	1.103	4.32	-0.743	8.91
12/26/2012	17:17:00	14.696	14.229	0.467	1.077	4.32	-0.717	8.61
12/26/2012	17:32:00	14.702	14.243	0.459	1.059	4.32	-0.699	8.39
12/26/2012	17:47:00	14.697	14.240	0.457	1.054	4.32	-0.694	8.33
12/26/2012	18:02:00	14.692	14.230	0.462	1.066	4.32	-0.706	8.47
12/26/2012	18:17:00	14.698	14.242	0.456	1.052	4.32	-0.692	8.30
12/26/2012	18:32:00	14.701	14.251	0.450	1.038	4.32	-0.678	8.14
12/26/2012	18:47:00	14.704	14.258	0.446	1.029	4.32	-0.669	8.03
12/26/2012	19:02:00	14.709	14.264	0.445	1.027	4.32	-0.667	8.00
12/26/2012	19:17:00	14.706	14.264	0.442	1.020	4.32	-0.660	7.92
12/26/2012	19:32:00	14.703	14.267	0.436	1.006	4.32	-0.646	7.75
12/26/2012	19:47:00	14.710	14.280	0.430	0.992	4.32	-0.632	7.58
12/26/2012	20:02:00	14.713	14.271	0.442	1.020	4.32	-0.660	7.92
12/26/2012	20:17:00	14.707	14.281	0.426	0.983	4.32	-0.623	7.47
12/26/2012	20:32:00	14.713	14.280	0.433	0.999	4.32	-0.639	7.67
12/26/2012	20:47:00	14.709	14.292	0.417	0.962	4.32	-0.602	7.22
12/26/2012	21:02:00	14.696	14.284	0.412	0.950	4.32	-0.590	7.09
12/26/2012	21:17:00	14.709	14.293	0.416	0.960	4.32	-0.600	7.20
12/26/2012	21:32:00	14.704	14.283	0.421	0.971	4.32	-0.611	7.33
12/26/2012	21:47:00	14.707	14.303	0.404	0.932	4.32	-0.572	6.86
12/26/2012	22:02:00	14.714	14.304	0.410	0.946	4.32	-0.586	7.03
12/26/2012	22:17:00	14.707	14.298	0.409	0.944	4.32	-0.584	7.00
12/26/2012	22:32:00	14.706	14.310	0.396	0.914	4.32	-0.554	6.64
12/26/2012	22:47:00	14.701	14.316	0.385	0.888	4.32	-0.528	6.34
12/26/2012	23:02:00	14.704	14.313	0.391	0.902	4.32	-0.542	6.50
12/26/2012	23:17:00	14.710	14.317	0.393	0.907	4.32	-0.547	6.56
12/26/2012	23:32:00	14.716	14.311	0.405	0.934	4.32	-0.574	6.89
12/26/2012	23:47:00	14.714	14.335	0.379	0.874	4.32	-0.514	6.17
12/27/2012	0:02:00	14.712	14.330	0.382	0.881	4.32	-0.521	6.26
12/27/2012	0:17:00	14.711	14.313	0.398	0.918	4.32	-0.558	6.70
12/27/2012	0:32:00	14.707	14.334	0.373	0.861	4.32	-0.501	6.01
12/27/2012	0:47:00	14.706	14.336	0.370	0.854	4.32	-0.494	5.92
12/27/2012	1:02:00	14.713	14.325	0.388	0.895	4.32	-0.535	6.42
12/27/2012	1:17:00	14.694	14.328	0.366	0.844	4.32	-0.484	5.81
12/27/2012	1:32:00	14.704	14.346	0.358	0.826	4.32	-0.466	5.59
12/27/2012	1:47:00	14.702	14.322	0.380	0.877	4.32	-0.517	6.20
12/27/2012	2:02:00	14.697	14.336	0.361	0.833	4.32	-0.473	5.67
12/27/2012	2:17:00	14.717	14.357	0.360	0.831	4.32	-0.471	5.65
12/27/2012	2:32:00	14.716	14.342	0.374	0.863	4.32	-0.503	6.03
12/27/2012	2:47:00	14.712	14.346	0.366	0.844	4.32	-0.484	5.81
12/27/2012	3:02:00	14.719	14.351	0.368	0.849	4.32	-0.489	5.87
12/27/2012	3:17:00	14.720	14.350	0.370	0.854	4.32	-0.494	5.92
12/27/2012	3:32:00	14.708	14.344	0.364	0.840	4.32	-0.480	5.76
12/27/2012	3:47:00	14.712	14.351	0.361	0.833	4.32	-0.473	5.67
12/27/2012	4:02:00	14.709	14.367	0.342	0.789	4.32	-0.429	5.15
12/27/2012	4:17:00	14.725	14.369	0.356	0.821	4.32	-0.461	5.54
12/27/2012	4:32:00	14.710	14.366	0.344	0.794	4.32	-0.434	5.20

12/27/2012	4:47:00	14.713	14.354	0.359	0.828	4.32	-0.468	5.62
12/27/2012	5:02:00	14.714	14.359	0.355	0.819	4.32	-0.459	5.51
12/27/2012	5:17:00	14.723	14.372	0.351	0.810	4.32	-0.450	5.40
12/27/2012	5:32:00	14.723	14.376	0.347	0.801	4.32	-0.441	5.29
12/27/2012	5:47:00	14.724	14.365	0.359	0.828	4.32	-0.468	5.62
12/27/2012	6:02:00	14.719	14.365	0.354	0.817	4.32	-0.457	5.48
12/27/2012	6:17:00	14.732	14.373	0.359	0.828	4.32	-0.468	5.62
12/27/2012	6:32:00	14.727	14.375	0.352	0.812	4.32	-0.452	5.42
12/27/2012	6:47:00	14.733	14.385	0.348	0.803	4.32	-0.443	5.31
12/27/2012	7:02:00	14.735	14.392	0.343	0.791	4.32	-0.431	5.18
12/27/2012	7:17:00	14.748	14.400	0.348	0.803	4.32	-0.443	5.31
12/27/2012	7:32:00	14.743	14.402	0.341	0.787	4.32	-0.427	5.12
12/27/2012	7:47:00	14.750	14.409	0.341	0.787	4.32	-0.427	5.12
12/27/2012	8:02:00	14.751	14.408	0.343	0.791	4.32	-0.431	5.18
12/27/2012	8:17:00	14.756	14.411	0.345	0.796	4.32	-0.436	5.23
12/27/2012	8:32:00	14.756	14.412	0.344	0.794	4.32	-0.434	5.20
12/27/2012	8:47:00	14.754	14.411	0.343	0.791	4.32	-0.431	5.18
12/27/2012	9:02:00	14.757	14.419	0.338	0.780	4.32	-0.420	5.04
12/27/2012	9:17:00	14.764	14.415	0.349	0.805	4.32	-0.445	5.34
12/27/2012	9:32:00	14.766	14.433	0.333	0.768	4.32	-0.408	4.90
12/27/2012	9:47:00	14.775	14.420	0.355	0.819	4.32	-0.459	5.51
12/27/2012	10:02:00	14.770	14.433	0.337	0.777	4.32	-0.417	5.01
12/27/2012	10:17:00	14.769	14.436	0.333	0.768	4.32	-0.408	4.90
12/27/2012	10:32:00	14.777	14.434	0.343	0.791	4.32	-0.431	5.18
12/27/2012	10:47:00	14.776	14.434	0.342	0.789	4.32	-0.429	5.15
12/27/2012	11:02:00	14.783	14.436	0.347	0.801	4.32	-0.441	5.29
12/27/2012	11:17:00	14.774	14.441	0.333	0.768	4.32	-0.408	4.90
12/27/2012	11:32:00	14.780	14.435	0.345	0.796	4.32	-0.436	5.23
12/27/2012	11:47:00	14.776	14.438	0.338	0.780	4.32	-0.420	5.04
12/27/2012	12:02:00	14.770	14.433	0.337	0.777	4.32	-0.417	5.01
12/27/2012	12:17:00	14.774	14.433	0.341	0.787	4.32	-0.427	5.12
12/27/2012	12:32:00	14.769	14.434	0.335	0.773	4.32	-0.413	4.95
12/27/2012	12:47:00	14.771	14.435	0.336	0.775	4.32	-0.415	4.98
12/27/2012	13:02:00	14.769	14.432	0.337	0.777	4.32	-0.417	5.01
12/27/2012	13:17:00	14.765	14.430	0.335	0.773	4.32	-0.413	4.95
12/27/2012	13:32:00	14.767	14.428	0.339	0.782	4.32	-0.422	5.06
12/27/2012	13:47:00	14.760	14.428	0.332	0.766	4.32	-0.406	4.87
12/27/2012	14:02:00	14.765	14.427	0.338	0.780	4.32	-0.420	5.04
12/27/2012	14:17:00	14.765	14.434	0.331	0.764	4.32	-0.404	4.84
12/27/2012	14:32:00	14.763	14.436	0.327	0.754	4.32	-0.394	4.73
12/27/2012	14:47:00	14.761	14.435	0.326	0.752	4.32	-0.392	4.70
12/27/2012	15:02:00	14.764	14.435	0.329	0.759	4.32	-0.399	4.79
12/27/2012	15:17:00	14.767	14.434	0.333	0.768	4.32	-0.408	4.90
12/27/2012	15:32:00	14.767	14.440	0.327	0.754	4.32	-0.394	4.73
12/27/2012	15:47:00	14.769	14.436	0.333	0.768	4.32	-0.408	4.90
12/27/2012	16:02:00	14.767	14.442	0.325	0.750	4.32	-0.390	4.68
12/27/2012	16:17:00	14.770	14.441	0.329	0.759	4.32	-0.399	4.79
12/27/2012	16:32:00	14.771	14.442	0.329	0.759	4.32	-0.399	4.79
12/27/2012	16:47:00	14.769	14.447	0.322	0.743	4.32	-0.383	4.59
12/27/2012	17:02:00	14.775	14.448	0.327	0.754	4.32	-0.394	4.73
12/27/2012	17:17:00	14.779	14.463	0.316	0.729	4.32	-0.369	4.43
12/27/2012	17:32:00	14.781	14.460	0.321	0.741	4.32	-0.381	4.57
12/27/2012	17:47:00	14.779	14.461	0.318	0.734	4.32	-0.374	4.48
12/27/2012	18:02:00	14.790	14.462	0.328	0.757	4.32	-0.397	4.76
12/27/2012	18:17:00	14.789	14.465	0.324	0.747	4.32	-0.387	4.65
12/27/2012	18:32:00	14.794	14.473	0.321	0.741	4.32	-0.381	4.57
12/27/2012	18:47:00	14.793	14.484	0.309	0.713	4.32	-0.353	4.23
12/27/2012	19:02:00	14.796	14.469	0.327	0.754	4.32	-0.394	4.73
12/27/2012	19:17:00	14.796	14.475	0.321	0.741	4.32	-0.381	4.57
12/27/2012	19:32:00	14.793	14.478	0.315	0.727	4.32	-0.367	4.40
12/27/2012	19:47:00	14.791	14.474	0.317	0.731	4.32	-0.371	4.46
12/27/2012	20:02:00	14.789	14.473	0.316	0.729	4.32	-0.369	4.43
12/27/2012	20:17:00	14.802	14.474	0.328	0.757	4.32	-0.397	4.76
12/27/2012	20:32:00	14.804	14.478	0.326	0.752	4.32	-0.392	4.70
12/27/2012	20:47:00	14.800	14.476	0.324	0.747	4.32	-0.387	4.65
12/27/2012	21:02:00	14.805	14.482	0.323	0.745	4.32	-0.385	4.62
12/27/2012	21:17:00	14.798	14.481	0.317	0.731	4.32	-0.371	4.46
12/27/2012	21:32:00	14.801	14.483	0.318	0.734	4.32	-0.374	4.48
12/27/2012	21:47:00	14.796	14.486	0.310	0.715	4.32	-0.355	4.26
12/27/2012	22:02:00	14.798	14.484	0.314	0.724	4.32	-0.364	4.37
12/27/2012	22:17:00	14.799	14.491	0.308	0.711	4.32	-0.351	4.21
12/27/2012	22:32:00	14.810	14.490	0.320	0.738	4.32	-0.378	4.54
12/27/2012	22:47:00	14.812	14.501	0.311	0.717	4.32	-0.357	4.29
12/27/2012	23:02:00	14.808	14.491	0.317	0.731	4.32	-0.371	4.46
12/27/2012	23:17:00	14.814	14.499	0.315	0.727	4.32	-0.367	4.40
12/27/2012	23:32:00	14.816	14.497	0.319	0.736	4.32	-0.376	4.51
12/27/2012	23:47:00	14.818	14.504	0.314	0.724	4.32	-0.364	4.37
12/28/2012	0:02:00	14.811	14.498	0.313	0.722	4.32	-0.362	4.35
12/28/2012	0:17:00	14.807	14.497	0.310	0.715	4.32	-0.355	4.26
12/28/2012	0:32:00	14.802	14.497	0.305	0.704	4.32	-0.344	4.12
12/28/2012	0:47:00	14.804	14.496	0.308	0.711	4.32	-0.351	4.21
12/28/2012	1:02:00	14.813	14.498	0.315	0.727	4.32	-0.367	4.40
12/28/2012	1:17:00	14.812	14.497	0.315	0.727	4.32	-0.367	4.40
12/28/2012	1:32:00	14.817	14.495	0.322	0.743	4.32	-0.383	4.59
12/28/2012	1:47:00	14.807	14.495	0.312	0.720	4.32	-0.360	4.32
12/28/2012	2:02:00	14.812	14.506	0.306	0.706	4.32	-0.346	4.15
12/28/2012	2:17:00	14.814	14.499	0.315	0.727	4.32	-0.367	4.40
12/28/2012	2:32:00	14.820	14.503	0.317	0.731	4.32	-0.371	4.46
12/28/2012	2:47:00	14.800	14.502	0.298	0.687	4.32	-0.327	3.93
12/28/2012	3:02:00	14.802	14.507	0.295	0.681	4.32	-0.321	3.85
12/28/2012	3:17:00	14.810	14.505	0.305	0.704	4.32	-0.344	4.12
12/28/2012	3:32:00	14.820	14.507	0.313	0.722	4.32	-0.362	4.35
12/28/2012	3:47:00	14.816	14.509	0.307	0.708	4.32	-0.348	4.18
12/28/2012	4:02:00	14.810	14.510	0.300	0.692	4.32	-0.332	3.99
12/28/2012	4:17:00	14.824	14.511	0.313	0.722	4.32	-0.362	4.35
12/28/2012	4:32:00	14.813	14.514	0.299	0.690	4.32	-0.330	3.96
12/28/2012	4:47:00	14.811	14.508	0.303	0.699	4.32	-0.339	4.07
12/28/2012	5:02:00	14.816	14.514	0.302	0.697	4.32	-0.337	4.04
12/28/2012	5:17:00	14.826	14.521	0.305	0.704	4.32	-0.344	4.12
12/28/2012	5:32:00	14.827	14.515	0.312	0.720	4.32	-0.360	4.32
12/28/2012	5:47:00	14.819	14.523	0.296	0.683	4.32	-0.323	3.87
12/28/2012	6:02:00	14.824	14.523	0.301	0.694	4.32	-0.334	4.01
12/28/2012	6:17:00	14.829	14.522	0.307	0.708	4.32	-0.348	4.18
12/28/2012	6:32:00	14.821	14.523	0.298	0.687	4.32	-0.327	3.93
12/28/2012	6:47:00	14.824	14.529	0.295	0.681	4.32	-0.321	3.85
12/28/2012	7:02:00	14.835	14.532	0.303	0.699	4.32	-0.339	4.07
12/28/2012	7:17:00	14.840	14.527	0.313	0.722	4.32	-0.362	4.35
12/28/2012	7:32:00	14.820	14.525	0.295	0.681	4.32	-0.321	3.85
12/28/2012	7:47:00	14.829	14.530	0.299	0.690	4.32	-0.330	3.96
12/28/2012	8:02:00	14.829	14.538	0.291	0.671	4.32	-0.311	3.74
12/28/2012	8:17:00	14.835	14.531	0.304	0.701	4.32	-0.341	4.10
12/28/2012	8:32:00	14.837	14.530	0.307	0.708	4.32	-0.348	4.18
12/28/2012	8:47:00	14.842	14.545	0.297	0.685	4.32	-0.325	3.90
12/28/2012	9:02:00	14.843	14.540	0.303	0.699	4.32	-0.339	4.07
12/28/2012	9:17:00	14.840	14.546	0.294	0.678	4.32	-0.318	3.82
12/28/2012	9:32:00	14.843	14.541	0.302	0.697	4.32	-0.337	4.04
12/28/2012	9:47:00	14.837	14.543	0.294	0.678	4.32	-0.318	3.82
12/28/2012	10:02:00	14.838	14.538	0.300	0.692	4.32	-0.332	3.99
12/28/2012	10:17:00	14.841	14.540	0.301	0.694	4.32	-0.334	4.01
12/28/2012	10:32:00	14.850	14.544	0.306	0.706	4.32	-0.346	4.15
12/28/2012	10:47:00	14.848	14.544	0.304	0.701	4.32	-0.341	4.10
12/28/2012	11:02:00	14.854	14.539	0.315	0.727	4.32	-0.367	4.40
12/28/2012	11:17:00	14.841	14.538	0.303	0.699	4.32	-0.339	4.07
12/28/2012	11:32:00	14.836	14.538	0.298	0.687	4.32	-0.327	3.93
12/28/2012	11:47:00	14.834	14.527	0.307	0.708	4.32	-0.348	4.18
12/28/2012	12:02:00	14.830	14.520	0.310	0.715	4.32	-0.355	4.26
12/28/2012	12:17:00	14.823	14.518	0.305	0.704	4.32	-0.344	4.12
12/28/2012	12:32:00	14.820	14.511	0.309	0.713	4.32	-0.353	4.23
12/28/2012	12:47:00	14.813	14.505	0.308	0.711	4.32	-0.351	4.21
12/28/2012	13:02:00	14.816	14.501	0.315	0.727	4.32	-0.367	4.40
12/28/2012	13:17:00	14.809	14.496	0.313	0.722	4.32	-0.362	4.35
12/28/2012	13:32:00	14.806	14.501	0.305	0.704	4.32	-0.344	4.12
12/28/2012	13:47:00	14.796	14.495	0.301	0.694	4.32	-0.334	4.01

12/28/2012	14:02:00	14.801	14.499	0.302	0.697	4.32	-0.337	4.04
12/28/2012	14:17:00	14.800	14.493	0.307	0.708	4.32	-0.348	4.18
12/28/2012	14:32:00	14.797	14.494	0.303	0.699	4.32	-0.339	4.07
12/28/2012	14:47:00	14.800	14.487	0.313	0.722	4.32	-0.362	4.35
12/28/2012	15:02:00	14.796	14.493	0.303	0.699	4.32	-0.339	4.07
12/28/2012	15:17:00	14.795	14.482	0.313	0.722	4.32	-0.362	4.35
12/28/2012	15:32:00	14.787	14.476	0.311	0.717	4.32	-0.357	4.29
12/28/2012	15:47:00	14.776	14.479	0.297	0.685	4.32	-0.325	3.90
12/28/2012	16:02:00	14.790	14.480	0.310	0.715	4.32	-0.355	4.26
12/28/2012	16:17:00	14.788	14.481	0.307	0.708	4.32	-0.348	4.18
12/28/2012	16:32:00	14.781	14.473	0.308	0.711	4.32	-0.351	4.21
12/28/2012	16:47:00	14.781	14.476	0.305	0.704	4.32	-0.344	4.12
12/28/2012	17:02:00	14.780	14.477	0.303	0.699	4.32	-0.339	4.07
12/28/2012	17:17:00	14.777	14.471	0.306	0.706	4.32	-0.346	4.15
12/28/2012	17:32:00	14.780	14.474	0.306	0.706	4.32	-0.346	4.15
12/28/2012	17:47:00	14.781	14.471	0.310	0.715	4.32	-0.355	4.26
12/28/2012	18:02:00	14.776	14.482	0.294	0.678	4.32	-0.318	3.82
12/28/2012	18:17:00	14.778	14.468	0.310	0.715	4.32	-0.355	4.26
12/28/2012	18:32:00	14.773	14.465	0.308	0.711	4.32	-0.351	4.21
12/28/2012	18:47:00	14.772	14.466	0.306	0.706	4.32	-0.346	4.15
12/28/2012	19:02:00	14.776	14.458	0.318	0.734	4.32	-0.374	4.48
12/28/2012	19:17:00	14.776	14.481	0.295	0.681	4.32	-0.321	3.85
12/28/2012	19:32:00	14.781	14.463	0.318	0.734	4.32	-0.374	4.48
12/28/2012	19:47:00	14.782	14.485	0.297	0.685	4.32	-0.325	3.90
12/28/2012	20:02:00	14.780	14.488	0.292	0.674	4.32	-0.314	3.76
12/28/2012	20:17:00	14.775	14.474	0.301	0.694	4.32	-0.334	4.01
12/28/2012	20:32:00	14.774	14.487	0.287	0.662	4.32	-0.302	3.63
12/28/2012	20:47:00	14.778	14.477	0.301	0.694	4.32	-0.334	4.01
12/28/2012	21:02:00	14.778	14.455	0.323	0.745	4.32	-0.385	4.62
12/28/2012	21:17:00	14.770	14.471	0.299	0.690	4.32	-0.330	3.96
12/28/2012	21:32:00	14.770	14.458	0.312	0.720	4.32	-0.360	4.32
12/28/2012	21:47:00	14.767	14.465	0.302	0.697	4.32	-0.337	4.04
12/28/2012	22:02:00	14.763	14.468	0.295	0.681	4.32	-0.321	3.85
12/28/2012	22:17:00	14.764	14.454	0.310	0.715	4.32	-0.355	4.26
12/28/2012	22:32:00	14.751	14.446	0.305	0.704	4.32	-0.344	4.12
12/28/2012	22:47:00	14.754	14.443	0.311	0.717	4.32	-0.357	4.29
12/28/2012	23:02:00	14.748	14.461	0.287	0.662	4.32	-0.302	3.63
12/28/2012	23:17:00	14.738	14.458	0.280	0.646	4.32	-0.286	3.43
12/28/2012	23:32:00	14.746	14.442	0.304	0.701	4.32	-0.341	4.10
12/28/2012	23:47:00	14.742	14.447	0.295	0.681	4.32	-0.321	3.85
12/29/2012	0:02:00	14.729	14.432	0.297	0.685	4.32	-0.325	3.90
12/29/2012	0:17:00	14.729	14.414	0.315	0.727	4.32	-0.367	4.40
12/29/2012	0:32:00	14.722	14.424	0.298	0.687	4.32	-0.327	3.93
12/29/2012	0:47:00	14.729	14.434	0.295	0.681	4.32	-0.321	3.85
12/29/2012	1:02:00	14.727	14.438	0.289	0.667	4.32	-0.307	3.68
12/29/2012	1:17:00	14.732	14.428	0.304	0.701	4.32	-0.341	4.10
12/29/2012	1:32:00	14.727	14.443	0.284	0.655	4.32	-0.295	3.54
12/29/2012	1:47:00	14.731	14.427	0.304	0.701	4.32	-0.341	4.10
12/29/2012	2:02:00	14.725	14.428	0.297	0.685	4.32	-0.325	3.90
12/29/2012	2:17:00	14.720	14.420	0.300	0.692	4.32	-0.332	3.99
12/29/2012	2:32:00	14.713	14.407	0.306	0.706	4.32	-0.346	4.15
12/29/2012	2:47:00	14.710	14.406	0.304	0.701	4.32	-0.341	4.10
12/29/2012	3:02:00	14.710	14.409	0.301	0.694	4.32	-0.334	4.01
12/29/2012	3:17:00	14.721	14.411	0.310	0.715	4.32	-0.355	4.26
12/29/2012	3:32:00	14.720	14.396	0.324	0.747	4.32	-0.387	4.65
12/29/2012	3:47:00	14.756	14.392	0.364	0.840	4.32	-0.480	5.76
12/29/2012	4:02:00	14.812	14.387	0.425	0.980	4.32	-0.620	7.45
12/29/2012	4:17:00	14.898	14.391	0.507	1.170	4.32	-0.810	9.72
12/29/2012	4:32:00	14.998	14.374	0.624	1.440	4.32	-1.080	12.95
12/29/2012	4:47:00	15.084	14.359	0.725	1.673	4.32	-1.313	15.75
12/29/2012	5:02:00	15.153	14.351	0.802	1.850	4.32	-1.490	17.88
12/29/2012	5:17:00	15.184	14.341	0.843	1.945	4.32	-1.585	19.02
12/29/2012	5:32:00	15.143	14.333	0.810	1.869	4.32	-1.509	18.10
12/29/2012	5:47:00	15.110	14.334	0.776	1.790	4.32	-1.430	17.16
12/29/2012	6:02:00	15.043	14.342	0.701	1.617	4.32	-1.257	15.09
12/29/2012	6:17:00	15.000	14.338	0.662	1.527	4.32	-1.167	14.01
12/29/2012	6:32:00	14.954	14.338	0.616	1.421	4.32	-1.061	12.73
12/29/2012	6:47:00	14.922	14.326	0.596	1.375	4.32	-1.015	12.18
12/29/2012	7:02:00	14.905	14.329	0.576	1.329	4.32	-0.969	11.63
12/29/2012	7:17:00	14.892	14.328	0.564	1.301	4.32	-0.941	11.29
12/29/2012	7:32:00	14.882	14.332	0.550	1.269	4.32	-0.909	10.91
12/29/2012	7:47:00	14.875	14.349	0.526	1.213	4.32	-0.853	10.24
12/29/2012	8:02:00	14.872	14.349	0.523	1.207	4.32	-0.847	10.16
12/29/2012	8:17:00	14.867	14.356	0.511	1.179	4.32	-0.819	9.83
12/29/2012	8:32:00	14.860	14.359	0.501	1.156	4.32	-0.796	9.55
12/29/2012	8:47:00	14.860	14.350	0.510	1.177	4.32	-0.817	9.80
12/29/2012	9:02:00	14.849	14.354	0.495	1.142	4.32	-0.782	9.38
12/29/2012	9:17:00	14.844	14.350	0.494	1.140	4.32	-0.780	9.36
12/29/2012	9:32:00	14.840	14.347	0.493	1.137	4.32	-0.777	9.33
12/29/2012	9:47:00	14.838	14.363	0.475	1.096	4.32	-0.736	8.83
12/29/2012	10:02:00	14.835	14.349	0.486	1.121	4.32	-0.761	9.13
12/29/2012	10:17:00	14.827	14.348	0.479	1.105	4.32	-0.745	8.94
12/29/2012	10:32:00	14.820	14.341	0.479	1.105	4.32	-0.745	8.94
12/29/2012	10:47:00	14.816	14.342	0.474	1.094	4.32	-0.734	8.80
12/29/2012	11:02:00	14.811	14.343	0.468	1.080	4.32	-0.720	8.64
12/29/2012	11:17:00	14.813	14.336	0.477	1.100	4.32	-0.740	8.89
12/29/2012	11:32:00	14.803	14.336	0.467	1.077	4.32	-0.717	8.61
12/29/2012	11:47:00	14.791	14.333	0.458	1.057	4.32	-0.697	8.36
12/29/2012	12:02:00	14.796	14.331	0.465	1.073	4.32	-0.713	8.55
12/29/2012	12:17:00	14.792	14.332	0.460	1.061	4.32	-0.701	8.41
12/29/2012	12:32:00	14.787	14.337	0.450	1.038	4.32	-0.678	8.14
12/29/2012	12:47:00	14.785	14.332	0.453	1.045	4.32	-0.685	8.22
12/29/2012	13:02:00	14.782	14.331	0.451	1.040	4.32	-0.680	8.17
12/29/2012	13:17:00	14.776	14.330	0.446	1.029	4.32	-0.669	8.03
12/29/2012	13:32:00	14.775	14.328	0.447	1.031	4.32	-0.671	8.05
12/29/2012	13:47:00	14.771	14.323	0.448	1.034	4.32	-0.674	8.08
12/29/2012	14:02:00	14.768	14.331	0.437	1.008	4.32	-0.648	7.78
12/29/2012	14:17:00	14.765	14.328	0.437	1.008	4.32	-0.648	7.78
12/29/2012	14:32:00	14.763	14.334	0.429	0.990	4.32	-0.630	7.56
12/29/2012	14:47:00	14.757	14.330	0.427	0.985	4.32	-0.625	7.50
12/29/2012	15:02:00	14.759	14.334	0.425	0.980	4.32	-0.620	7.45
12/29/2012	15:17:00	14.762	14.336	0.426	0.983	4.32	-0.623	7.47
12/29/2012	15:32:00	14.769	14.338	0.431	0.994	4.32	-0.634	7.61
12/29/2012	15:47:00	14.761	14.341	0.420	0.969	4.32	-0.609	7.31
12/29/2012	16:02:00	14.768	14.340	0.428	0.987	4.32	-0.627	7.53
12/29/2012	16:17:00	14.762	14.345	0.417	0.962	4.32	-0.602	7.22
12/29/2012	16:32:00	14.761	14.345	0.416	0.960	4.32	-0.600	7.20
12/29/2012	16:47:00	14.766	14.351	0.415	0.957	4.32	-0.597	7.17
12/29/2012	17:02:00	14.764	14.349	0.415	0.957	4.32	-0.597	7.17
12/29/2012	17:17:00	14.757	14.354	0.403	0.930	4.32	-0.570	6.84
12/29/2012	17:32:00	14.766	14.351	0.415	0.957	4.32	-0.597	7.17
12/29/2012	17:47:00	14.758	14.360	0.398	0.918	4.32	-0.558	6.70
12/29/2012	18:02:00	14.760	14.359	0.401	0.925	4.32	-0.565	6.78
12/29/2012	18:17:00	14.761	14.363	0.398	0.918	4.32	-0.558	6.70
12/29/2012	18:32:00	14.762	14.374	0.388	0.895	4.32	-0.535	6.42
12/29/2012	18:47:00	14.767	14.378	0.389	0.897	4.32	-0.537	6.45
12/29/2012	19:02:00	14.777	14.380	0.397	0.916	4.32	-0.556	6.67
12/29/2012	19:17:00	14.777	14.388	0.389	0.897	4.32	-0.537	6.45
12/29/2012	19:32:00	14.778	14.396	0.382	0.881	4.32	-0.521	6.26
12/29/2012	19:47:00	14.790	14.395	0.395	0.911	4.32	-0.551	6.62
12/29/2012	20:02:00	14.785	14.397	0.388	0.895	4.32	-0.535	6.42
12/29/2012	20:17:00	14.790	14.403	0.387	0.893	4.32	-0.533	6.39
12/29/2012	20:32:00	14.793	14.413	0.380	0.877	4.32	-0.517	6.20
12/29/2012	20:47:00	14.797	14.398	0.399	0.920	4.32	-0.560	6.73
12/29/2012	21:02:00	14.794	14.440	0.354	0.817	4.32	-0.457	5.48
12/29/2012	21:17:00	14.811	14.433	0.378	0.872	4.32	-0.512	6.14
12/29/2012	21:32:00	14.809	14.427	0.382	0.881	4.32	-0.521	6.26
12/29/2012	21:47:00	14.808	14.432	0.376	0.867	4.32	-0.507	6.09
12/29/2012	22:02:00	14.809	14.435	0.374	0.863	4.32	-0.503	6.03
12/29/2012	22:17:00	14.820	14.439	0.381	0.879	4.32	-0.519	6.23
12/29/2012	22:32:00	14.823	14.443	0.380	0.877	4.32	-0.517	6.20
12/29/2012	22:47:00	14.825	14.456	0.369	0.851	4.32	-0.491	5.90
12/29/2012	23:02:00	14.831	14.460	0.371	0.856	4.32	-0.496	5.95

12/29/2012	23:17:00	14.834	14.466	0.368	0.849	4.32	-0.489	5.87
12/29/2012	23:32:00	14.832	14.472	0.360	0.831	4.32	-0.471	5.65
12/29/2012	23:47:00	14.835	14.463	0.372	0.858	4.32	-0.498	5.98
12/30/2012	0:02:00	14.840	14.459	0.381	0.879	4.32	-0.519	6.23
12/30/2012	0:17:00	14.833	14.473	0.360	0.831	4.32	-0.471	5.65
12/30/2012	0:32:00	14.843	14.466	0.377	0.870	4.32	-0.510	6.12
12/30/2012	0:47:00	14.845	14.464	0.381	0.879	4.32	-0.519	6.23
12/30/2012	1:02:00	14.839	14.466	0.373	0.861	4.32	-0.501	6.01
12/30/2012	1:17:00	14.845	14.496	0.349	0.805	4.32	-0.445	5.34
12/30/2012	1:32:00	14.847	14.486	0.361	0.833	4.32	-0.473	5.67
12/30/2012	1:47:00	14.846	14.488	0.358	0.826	4.32	-0.466	5.59
12/30/2012	2:02:00	14.847	14.505	0.342	0.789	4.32	-0.429	5.15
12/30/2012	2:17:00	14.861	14.495	0.366	0.844	4.32	-0.484	5.81
12/30/2012	2:32:00	14.858	14.502	0.356	0.821	4.32	-0.461	5.54
12/30/2012	2:47:00	14.852	14.491	0.361	0.833	4.32	-0.473	5.67
12/30/2012	3:02:00	14.864	14.502	0.362	0.835	4.32	-0.475	5.70
12/30/2012	3:17:00	14.866	14.517	0.349	0.805	4.32	-0.445	5.34
12/30/2012	3:32:00	14.876	14.525	0.351	0.810	4.32	-0.450	5.40
12/30/2012	3:47:00	14.874	14.506	0.368	0.849	4.32	-0.489	5.87
12/30/2012	4:02:00	14.881	14.526	0.355	0.819	4.32	-0.459	5.51
12/30/2012	4:17:00	14.880	14.529	0.351	0.810	4.32	-0.450	5.40
12/30/2012	4:32:00	14.870	14.520	0.350	0.807	4.32	-0.447	5.37
12/30/2012	4:47:00	14.872	14.530	0.342	0.789	4.32	-0.429	5.15
12/30/2012	5:02:00	14.873	14.530	0.343	0.791	4.32	-0.431	5.18
12/30/2012	5:17:00	14.875	14.532	0.343	0.791	4.32	-0.431	5.18
12/30/2012	5:32:00	14.896	14.543	0.353	0.814	4.32	-0.454	5.45
12/30/2012	5:47:00	14.900	14.546	0.354	0.817	4.32	-0.457	5.48
12/30/2012	6:02:00	14.892	14.550	0.342	0.789	4.32	-0.429	5.15
12/30/2012	6:17:00	14.908	14.564	0.344	0.794	4.32	-0.434	5.20
12/30/2012	6:32:00	14.909	14.569	0.340	0.784	4.32	-0.424	5.09
12/30/2012	6:47:00	14.901	14.574	0.327	0.754	4.32	-0.394	4.73
12/30/2012	7:02:00	14.919	14.574	0.345	0.796	4.32	-0.436	5.23
12/30/2012	7:17:00	14.914	14.585	0.329	0.759	4.32	-0.399	4.79
12/30/2012	7:32:00	14.928	14.590	0.338	0.780	4.32	-0.420	5.04
12/30/2012	7:47:00	14.921	14.597	0.324	0.747	4.32	-0.387	4.65
12/30/2012	8:02:00	14.933	14.593	0.340	0.784	4.32	-0.424	5.09
12/30/2012	8:17:00	14.933	14.599	0.334	0.771	4.32	-0.411	4.93
12/30/2012	8:32:00	14.946	14.608	0.338	0.780	4.32	-0.420	5.04
12/30/2012	8:47:00	14.946	14.603	0.343	0.791	4.32	-0.431	5.18
12/30/2012	9:02:00	14.957	14.615	0.342	0.789	4.32	-0.429	5.15
12/30/2012	9:17:00	14.954	14.613	0.341	0.787	4.32	-0.427	5.12
12/30/2012	9:32:00	14.953	14.622	0.331	0.764	4.32	-0.404	4.84
12/30/2012	9:47:00	14.960	14.628	0.332	0.766	4.32	-0.406	4.87
12/30/2012	10:02:00	14.966	14.628	0.338	0.780	4.32	-0.420	5.04
12/30/2012	10:17:00	14.969	14.629	0.340	0.784	4.32	-0.424	5.09
12/30/2012	10:32:00	14.969	14.638	0.331	0.764	4.32	-0.404	4.84
12/30/2012	10:47:00	14.972	14.633	0.339	0.782	4.32	-0.422	5.06
12/30/2012	11:02:00	14.965	14.630	0.335	0.773	4.32	-0.413	4.95
12/30/2012	11:17:00	14.969	14.629	0.340	0.784	4.32	-0.424	5.09
12/30/2012	11:32:00	14.974	14.627	0.347	0.801	4.32	-0.441	5.29
12/30/2012	11:47:00	14.964	14.627	0.337	0.777	4.32	-0.417	5.01
12/30/2012	12:02:00	14.964	14.630	0.334	0.771	4.32	-0.411	4.93
12/30/2012	12:17:00	14.964	14.629	0.335	0.773	4.32	-0.413	4.95
12/30/2012	12:32:00	14.963	14.628	0.335	0.773	4.32	-0.413	4.95
12/30/2012	12:47:00	14.962	14.626	0.336	0.775	4.32	-0.415	4.98
12/30/2012	13:02:00	14.957	14.620	0.337	0.777	4.32	-0.417	5.01
12/30/2012	13:17:00	14.955	14.624	0.331	0.764	4.32	-0.404	4.84
12/30/2012	13:32:00	14.957	14.616	0.341	0.787	4.32	-0.427	5.12
12/30/2012	13:47:00	14.945	14.617	0.328	0.757	4.32	-0.397	4.76
12/30/2012	14:02:00	14.952	14.618	0.334	0.771	4.32	-0.411	4.93
12/30/2012	14:17:00	14.954	14.619	0.335	0.773	4.32	-0.413	4.95
12/30/2012	14:32:00	14.954	14.620	0.334	0.771	4.32	-0.411	4.93
12/30/2012	14:47:00	14.950	14.617	0.333	0.768	4.32	-0.408	4.90
12/30/2012	15:02:00	14.943	14.614	0.329	0.759	4.32	-0.399	4.79
12/30/2012	15:17:00	14.949	14.618	0.331	0.764	4.32	-0.404	4.84
12/30/2012	15:32:00	14.948	14.619	0.329	0.759	4.32	-0.399	4.79
12/30/2012	15:47:00	14.951	14.622	0.329	0.759	4.32	-0.399	4.79
12/30/2012	16:02:00	14.956	14.619	0.337	0.777	4.32	-0.417	5.01
12/30/2012	16:17:00	14.948	14.620	0.328	0.757	4.32	-0.397	4.76
12/30/2012	16:32:00	14.947	14.625	0.322	0.743	4.32	-0.383	4.59
12/30/2012	16:47:00	14.955	14.621	0.334	0.771	4.32	-0.411	4.93
12/30/2012	17:02:00	14.953	14.621	0.332	0.766	4.32	-0.406	4.87
12/30/2012	17:17:00	14.952	14.626	0.326	0.752	4.32	-0.392	4.70
12/30/2012	17:32:00	14.946	14.622	0.324	0.747	4.32	-0.387	4.65
12/30/2012	17:47:00	14.946	14.625	0.321	0.741	4.32	-0.381	4.57
12/30/2012	18:02:00	14.960	14.636	0.324	0.747	4.32	-0.387	4.65
12/30/2012	18:17:00	14.957	14.629	0.328	0.757	4.32	-0.397	4.76
12/30/2012	18:32:00	14.958	14.638	0.320	0.738	4.32	-0.378	4.54
12/30/2012	18:47:00	14.962	14.649	0.313	0.722	4.32	-0.362	4.35
12/30/2012	19:02:00	14.964	14.658	0.306	0.706	4.32	-0.346	4.15
12/30/2012	19:17:00	14.971	14.648	0.323	0.745	4.32	-0.385	4.62
12/30/2012	19:32:00	14.957	14.642	0.315	0.727	4.32	-0.367	4.40
12/30/2012	19:47:00	14.975	14.641	0.334	0.771	4.32	-0.411	4.93
12/30/2012	20:02:00	14.970	14.653	0.317	0.731	4.32	-0.371	4.46
12/30/2012	20:17:00	14.960	14.645	0.315	0.727	4.32	-0.367	4.40
12/30/2012	20:32:00	14.961	14.650	0.311	0.717	4.32	-0.357	4.29
12/30/2012	20:47:00	14.966	14.652	0.314	0.724	4.32	-0.364	4.37
12/30/2012	21:02:00	14.969	14.647	0.322	0.743	4.32	-0.383	4.59
12/30/2012	21:17:00	14.968	14.648	0.320	0.738	4.32	-0.378	4.54
12/30/2012	21:32:00	14.970	14.657	0.313	0.722	4.32	-0.362	4.35
12/30/2012	21:47:00	14.965	14.654	0.311	0.717	4.32	-0.357	4.29
12/30/2012	22:02:00	14.966	14.647	0.319	0.736	4.32	-0.376	4.51
12/30/2012	22:17:00	14.969	14.652	0.317	0.731	4.32	-0.371	4.46
12/30/2012	22:32:00	14.959	14.646	0.313	0.722	4.32	-0.362	4.35
12/30/2012	22:47:00	14.964	14.649	0.315	0.727	4.32	-0.367	4.40
12/30/2012	23:02:00	14.962	14.643	0.319	0.736	4.32	-0.376	4.51
12/30/2012	23:17:00	14.956	14.649	0.307	0.708	4.32	-0.348	4.18
12/30/2012	23:32:00	14.956	14.633	0.323	0.745	4.32	-0.385	4.62
12/30/2012	23:47:00	14.953	14.644	0.309	0.713	4.32	-0.353	4.23
12/31/2012	0:02:00	14.951	14.633	0.318	0.734	4.32	-0.374	4.48
12/31/2012	0:17:00	14.949	14.645	0.304	0.701	4.32	-0.341	4.10
12/31/2012	0:32:00	14.957	14.644	0.313	0.722	4.32	-0.362	4.35
12/31/2012	0:47:00	14.953	14.640	0.313	0.722	4.32	-0.362	4.35
12/31/2012	1:02:00	14.950	14.635	0.315	0.727	4.32	-0.367	4.40
12/31/2012	1:17:00	14.944	14.638	0.306	0.706	4.32	-0.346	4.15
12/31/2012	1:32:00	14.945	14.631	0.314	0.724	4.32	-0.364	4.37
12/31/2012	1:47:00	14.948	14.629	0.319	0.736	4.32	-0.376	4.51
12/31/2012	2:02:00	14.935	14.621	0.314	0.724	4.32	-0.364	4.37
12/31/2012	2:17:00	14.936	14.627	0.309	0.713	4.32	-0.353	4.23
12/31/2012	2:32:00	14.941	14.630	0.311	0.717	4.32	-0.357	4.29
12/31/2012	2:47:00	14.949	14.637	0.312	0.720	4.32	-0.360	4.32
12/31/2012	3:02:00	14.945	14.633	0.312	0.720	4.32	-0.360	4.32
12/31/2012	3:17:00	14.950	14.627	0.323	0.745	4.32	-0.385	4.62
12/31/2012	3:32:00	14.939	14.633	0.306	0.706	4.32	-0.346	4.15
12/31/2012	3:47:00	14.934	14.637	0.297	0.685	4.32	-0.325	3.90
12/31/2012	4:02:00	14.939	14.630	0.309	0.713	4.32	-0.353	4.23
12/31/2012	4:17:00	14.938	14.629	0.309	0.713	4.32	-0.353	4.23
12/31/2012	4:32:00	14.944	14.635	0.309	0.713	4.32	-0.353	4.23
12/31/2012	4:47:00	14.941	14.641	0.300	0.692	4.32	-0.332	3.99
12/31/2012	5:02:00	14.941	14.638	0.303	0.699	4.32	-0.339	4.07
12/31/2012	5:17:00	14.951	14.628	0.323	0.745	4.32	-0.385	4.62
12/31/2012	5:32:00	14.934	14.625	0.309	0.713	4.32	-0.353	4.23
12/31/2012	5:47:00	14.944	14.638	0.306	0.706	4.32	-0.346	4.15
12/31/2012	6:02:00	14.947	14.631	0.316	0.729	4.32	-0.369	4.43
12/31/2012	6:17:00	14.941	14.631	0.310	0.715	4.32	-0.355	4.26
12/31/2012	6:32:00	14.938	14.639	0.299	0.690	4.32	-0.330	3.96
12/31/2012	6:47:00	14.943	14.640	0.303	0.699	4.32	-0.339	4.07
12/31/2012	7:02:00	14.949	14.626	0.323	0.745	4.32	-0.385	4.62
12/31/2012	7:17:00	14.949	14.645	0.304	0.701	4.32	-0.341	4.10
12/31/2012	7:32:00	14.949	14.636	0.313	0.722	4.32	-0.362	4.35
12/31/2012	7:47:00	14.949	14.648	0.301	0.694	4.32	-0.334	4.01
12/31/2012	8:02:00	14.940	14.633	0.307	0.708	4.32	-0.348	4.18
12/31/2012	8:17:00	14.936	14.641	0.295	0.681	4.32	-0.321	3.85

12/31/2012	8:32:00	14.954	14.646	0.308	0.711	4.32	-0.351	4.21
12/31/2012	8:47:00	14.944	14.648	0.296	0.683	4.32	-0.323	3.87
12/31/2012	9:02:00	14.944	14.645	0.299	0.690	4.32	-0.330	3.96
12/31/2012	9:17:00	14.948	14.637	0.311	0.717	4.32	-0.357	4.29
12/31/2012	9:32:00	14.944	14.636	0.308	0.711	4.32	-0.351	4.21
12/31/2012	9:47:00	14.937	14.634	0.303	0.699	4.32	-0.339	4.07
12/31/2012	10:02:00	14.940	14.629	0.311	0.717	4.32	-0.357	4.29
12/31/2012	10:17:00	14.937	14.627	0.310	0.715	4.32	-0.355	4.26
12/31/2012	10:32:00	14.937	14.626	0.311	0.717	4.32	-0.357	4.29
12/31/2012	10:47:00	14.933	14.624	0.309	0.713	4.32	-0.353	4.23
12/31/2012	11:02:00	14.935	14.625	0.310	0.715	4.32	-0.355	4.26
12/31/2012	11:17:00	14.931	14.615	0.316	0.729	4.32	-0.369	4.43
12/31/2012	11:32:00	14.923	14.615	0.308	0.711	4.32	-0.351	4.21
12/31/2012	11:47:00	14.918	14.601	0.317	0.731	4.32	-0.371	4.46
12/31/2012	12:02:00	14.909	14.597	0.312	0.720	4.32	-0.360	4.32
12/31/2012	12:17:00	14.901	14.588	0.313	0.722	4.32	-0.362	4.35
12/31/2012	12:32:00	14.902	14.586	0.316	0.729	4.32	-0.369	4.43
12/31/2012	12:47:00	14.893	14.589	0.305	0.704	4.32	-0.344	4.12
12/31/2012	13:02:00	14.897	14.592	0.305	0.704	4.32	-0.344	4.12
12/31/2012	13:17:00	14.897	14.585	0.312	0.720	4.32	-0.360	4.32
12/31/2012	13:32:00	14.897	14.581	0.316	0.729	4.32	-0.369	4.43
12/31/2012	13:47:00	14.887	14.567	0.320	0.738	4.32	-0.378	4.54
12/31/2012	14:02:00	14.873	14.563	0.310	0.715	4.32	-0.355	4.26
12/31/2012	14:17:00	14.874	14.563	0.311	0.717	4.32	-0.357	4.29
12/31/2012	14:32:00	14.879	14.569	0.310	0.715	4.32	-0.355	4.26
12/31/2012	14:47:00	14.872	14.564	0.308	0.711	4.32	-0.351	4.21
12/31/2012	15:02:00	14.868	14.563	0.305	0.704	4.32	-0.344	4.12
12/31/2012	15:17:00	14.863	14.560	0.303	0.699	4.32	-0.339	4.07
12/31/2012	15:32:00	14.867	14.565	0.302	0.697	4.32	-0.337	4.04
12/31/2012	15:47:00	14.865	14.559	0.306	0.706	4.32	-0.346	4.15
12/31/2012	16:02:00	14.863	14.558	0.305	0.704	4.32	-0.344	4.12
12/31/2012	16:17:00	14.861	14.553	0.308	0.711	4.32	-0.351	4.21
12/31/2012	16:32:00	14.860	14.552	0.308	0.711	4.32	-0.351	4.21
12/31/2012	16:47:00	14.860	14.558	0.302	0.697	4.32	-0.337	4.04
12/31/2012	17:02:00	14.857	14.547	0.310	0.715	4.32	-0.355	4.26
12/31/2012	17:17:00	14.855	14.548	0.307	0.708	4.32	-0.348	4.18
12/31/2012	17:32:00	14.859	14.549	0.310	0.715	4.32	-0.355	4.26
12/31/2012	17:47:00	14.855	14.550	0.305	0.704	4.32	-0.344	4.12
12/31/2012	18:02:00	14.855	14.555	0.300	0.692	4.32	-0.332	3.99
12/31/2012	18:17:00	14.859	14.555	0.304	0.701	4.32	-0.341	4.10
12/31/2012	18:32:00	14.861	14.558	0.303	0.699	4.32	-0.339	4.07
12/31/2012	18:47:00	14.860	14.555	0.305	0.704	4.32	-0.344	4.12
12/31/2012	19:02:00	14.859	14.553	0.306	0.706	4.32	-0.346	4.15
12/31/2012	19:17:00	14.860	14.549	0.311	0.717	4.32	-0.357	4.29
12/31/2012	19:32:00	14.852	14.547	0.305	0.704	4.32	-0.344	4.12
12/31/2012	19:47:00	14.851	14.551	0.300	0.692	4.32	-0.332	3.99
12/31/2012	20:02:00	14.849	14.550	0.299	0.690	4.32	-0.330	3.96
12/31/2012	20:17:00	14.848	14.543	0.305	0.704	4.32	-0.344	4.12
12/31/2012	20:32:00	14.843	14.537	0.306	0.706	4.32	-0.346	4.15
12/31/2012	20:47:00	14.841	14.539	0.302	0.697	4.32	-0.337	4.04
12/31/2012	21:02:00	14.841	14.536	0.305	0.704	4.32	-0.344	4.12
12/31/2012	21:17:00	14.835	14.539	0.296	0.683	4.32	-0.323	3.87
12/31/2012	21:32:00	14.836	14.533	0.303	0.699	4.32	-0.339	4.07
12/31/2012	21:47:00	14.836	14.527	0.309	0.713	4.32	-0.353	4.23
12/31/2012	22:02:00	14.835	14.531	0.304	0.701	4.32	-0.341	4.10
12/31/2012	22:17:00	14.833	14.527	0.306	0.706	4.32	-0.346	4.15
12/31/2012	22:32:00	14.832	14.531	0.301	0.694	4.32	-0.334	4.01
12/31/2012	22:47:00	14.831	14.532	0.299	0.690	4.32	-0.330	3.96
12/31/2012	23:02:00	14.834	14.527	0.307	0.708	4.32	-0.348	4.18
12/31/2012	23:17:00	14.823	14.523	0.300	0.692	4.32	-0.332	3.99
12/31/2012	23:32:00	14.821	14.524	0.297	0.685	4.32	-0.325	3.90
12/31/2012	23:47:00	14.821	14.526	0.295	0.681	4.32	-0.321	3.85
1/1/2013	0:02:00	14.820	14.520	0.300	0.692	4.32	-0.332	3.99
1/1/2013	0:17:00	14.812	14.516	0.296	0.683	4.32	-0.323	3.87
1/1/2013	0:32:00	14.803	14.508	0.295	0.681	4.32	-0.321	3.85
1/1/2013	0:47:00	14.806	14.509	0.297	0.685	4.32	-0.325	3.90
1/1/2013	1:02:00	14.808	14.510	0.298	0.687	4.32	-0.327	3.93
1/1/2013	1:17:00	14.800	14.503	0.297	0.685	4.32	-0.325	3.90
1/1/2013	1:32:00	14.798	14.498	0.300	0.692	4.32	-0.332	3.99
1/1/2013	1:47:00	14.796	14.488	0.308	0.711	4.32	-0.351	4.21
1/1/2013	2:02:00	14.790	14.491	0.299	0.690	4.32	-0.330	3.96
1/1/2013	2:17:00	14.787	14.492	0.295	0.681	4.32	-0.321	3.85
1/1/2013	2:32:00	14.793	14.491	0.302	0.697	4.32	-0.337	4.04
1/1/2013	2:47:00	14.793	14.492	0.301	0.694	4.32	-0.334	4.01
1/1/2013	3:02:00	14.774	14.490	0.284	0.655	4.32	-0.295	3.54
1/1/2013	3:17:00	14.784	14.487	0.297	0.685	4.32	-0.325	3.90
1/1/2013	3:32:00	14.776	14.487	0.289	0.667	4.32	-0.307	3.68
1/1/2013	3:47:00	14.781	14.490	0.291	0.671	4.32	-0.311	3.74
1/1/2013	4:02:00	14.777	14.496	0.281	0.648	4.32	-0.288	3.46
1/1/2013	4:17:00	14.775	14.486	0.289	0.667	4.32	-0.307	3.68
1/1/2013	4:32:00	14.780	14.487	0.293	0.676	4.32	-0.316	3.79
1/1/2013	4:47:00	14.777	14.488	0.289	0.667	4.32	-0.307	3.68
1/1/2013	5:02:00	14.786	14.483	0.303	0.699	4.32	-0.339	4.07
1/1/2013	5:17:00	14.785	14.489	0.296	0.683	4.32	-0.323	3.87
1/1/2013	5:32:00	14.774	14.486	0.288	0.664	4.32	-0.304	3.65
1/1/2013	5:47:00	14.779	14.485	0.294	0.678	4.32	-0.318	3.82
1/1/2013	6:02:00	14.788	14.487	0.301	0.694	4.32	-0.334	4.01
1/1/2013	6:17:00	14.783	14.489	0.294	0.678	4.32	-0.318	3.82
1/1/2013	6:32:00	14.789	14.491	0.298	0.687	4.32	-0.327	3.93
1/1/2013	6:47:00	14.776	14.491	0.285	0.657	4.32	-0.297	3.57
1/1/2013	7:02:00	14.774	14.494	0.280	0.646	4.32	-0.286	3.43
1/1/2013	7:17:00	14.777	14.495	0.282	0.651	4.32	-0.291	3.49
1/1/2013	7:32:00	14.788	14.497	0.291	0.671	4.32	-0.311	3.74
1/1/2013	7:47:00	14.789	14.503	0.286	0.660	4.32	-0.300	3.60
1/1/2013	8:02:00	14.789	14.502	0.287	0.662	4.32	-0.302	3.63
1/1/2013	8:17:00	14.790	14.501	0.289	0.667	4.32	-0.307	3.68
1/1/2013	8:32:00	14.790	14.508	0.282	0.651	4.32	-0.291	3.49
1/1/2013	8:47:00	14.792	14.507	0.285	0.657	4.32	-0.297	3.57
1/1/2013	9:02:00	14.799	14.506	0.293	0.676	4.32	-0.316	3.79
1/1/2013	9:17:00	14.793	14.504	0.289	0.667	4.32	-0.307	3.68
1/1/2013	9:32:00	14.796	14.511	0.285	0.657	4.32	-0.297	3.57
1/1/2013	9:47:00	14.805	14.513	0.292	0.674	4.32	-0.314	3.76
1/1/2013	10:02:00	14.805	14.513	0.292	0.674	4.32	-0.314	3.76
1/1/2013	10:17:00	14.801	14.509	0.292	0.674	4.32	-0.314	3.76
1/1/2013	10:32:00	14.796	14.504	0.292	0.674	4.32	-0.314	3.76
1/1/2013	10:47:00	14.789	14.497	0.292	0.674	4.32	-0.314	3.76
1/1/2013	11:02:00	14.798	14.502	0.296	0.683	4.32	-0.323	3.87
1/1/2013	11:17:00	14.789	14.501	0.288	0.664	4.32	-0.304	3.65
1/1/2013	11:32:00	14.793	14.497	0.296	0.683	4.32	-0.323	3.87
1/1/2013	11:47:00	14.790	14.496	0.294	0.678	4.32	-0.318	3.82
1/1/2013	12:02:00	14.795	14.490	0.305	0.704	4.32	-0.344	4.12
1/1/2013	12:17:00	14.779	14.480	0.299	0.690	4.32	-0.330	3.96
1/1/2013	12:32:00	14.767	14.476	0.291	0.671	4.32	-0.311	3.74
1/1/2013	12:47:00	14.773	14.476	0.297	0.685	4.32	-0.325	3.90
1/1/2013	13:02:00	14.770	14.463	0.307	0.708	4.32	-0.348	4.18
1/1/2013	13:17:00	14.765	14.469	0.296	0.683	4.32	-0.323	3.87
1/1/2013	13:32:00	14.765	14.467	0.298	0.687	4.32	-0.327	3.93
1/1/2013	13:47:00	14.766	14.461	0.305	0.704	4.32	-0.344	4.12
1/1/2013	14:02:00	14.762	14.458	0.304	0.701	4.32	-0.341	4.10
1/1/2013	14:17:00	14.759	14.455	0.304	0.701	4.32	-0.341	4.10
1/1/2013	14:32:00	14.758	14.460	0.298	0.687	4.32	-0.327	3.93
1/1/2013	14:47:00	14.763	14.457	0.306	0.706	4.32	-0.346	4.15
1/1/2013	15:02:00	14.756	14.451	0.305	0.704	4.32	-0.344	4.12
1/1/2013	15:17:00	14.750	14.452	0.298	0.687	4.32	-0.327	3.93
1/1/2013	15:32:00	14.743	14.445	0.298	0.687	4.32	-0.327	3.93
1/1/2013	15:47:00	14.749	14.444	0.305	0.704	4.32	-0.344	4.12
1/1/2013	16:02:00	14.748	14.457	0.291	0.671	4.32	-0.311	3.74
1/1/2013	16:17:00	14.751	14.451	0.300	0.692	4.32	-0.332	3.99
1/1/2013	16:32:00	14.755	14.447	0.308	0.711	4.32	-0.351	4.21
1/1/2013	16:47:00	14.759	14.454	0.305	0.704	4.32	-0.344	4.12
1/1/2013	17:02:00	14.754	14.459	0.295	0.681	4.32	-0.321	3.85
1/1/2013	17:17:00	14.761	14.461	0.300	0.692	4.32	-0.332	3.99
1/1/2013	17:32:00	14.769	14.460	0.309	0.713	4.32	-0.353	4.23

1/1/2013	17:47:00	14.771	14.452	0.319	0.736	4.32	-0.376	4.51
1/1/2013	18:02:00	14.784	14.457	0.327	0.754	4.32	-0.394	4.73
1/1/2013	18:17:00	14.796	14.455	0.341	0.787	4.32	-0.427	5.12
1/1/2013	18:32:00	14.800	14.453	0.347	0.801	4.32	-0.441	5.29
1/1/2013	18:47:00	14.825	14.455	0.370	0.854	4.32	-0.494	5.92
1/1/2013	19:02:00	14.840	14.450	0.390	0.900	4.32	-0.540	6.48
1/1/2013	19:17:00	14.846	14.448	0.398	0.918	4.32	-0.558	6.70
1/1/2013	19:32:00	14.839	14.438	0.401	0.925	4.32	-0.565	6.78
1/1/2013	19:47:00	14.824	14.443	0.381	0.879	4.32	-0.519	6.23
1/1/2013	20:02:00	14.825	14.440	0.385	0.888	4.32	-0.528	6.34
1/1/2013	20:17:00	14.825	14.440	0.385	0.888	4.32	-0.528	6.34
1/1/2013	20:32:00	14.822	14.443	0.379	0.874	4.32	-0.514	6.17
1/1/2013	20:47:00	14.830	14.444	0.386	0.891	4.32	-0.531	6.37
1/1/2013	21:02:00	14.831	14.447	0.384	0.886	4.32	-0.526	6.31
1/1/2013	21:17:00	14.839	14.447	0.392	0.904	4.32	-0.544	6.53
1/1/2013	21:32:00	14.849	14.440	0.409	0.944	4.32	-0.584	7.00
1/1/2013	21:47:00	14.850	14.429	0.421	0.971	4.32	-0.611	7.33
1/1/2013	22:02:00	14.861	14.432	0.429	0.990	4.32	-0.630	7.56
1/1/2013	22:17:00	14.887	14.436	0.451	1.040	4.32	-0.680	8.17
1/1/2013	22:32:00	14.893	14.434	0.459	1.059	4.32	-0.699	8.39
1/1/2013	22:47:00	14.891	14.436	0.455	1.050	4.32	-0.690	8.28
1/1/2013	23:02:00	14.896	14.434	0.462	1.066	4.32	-0.706	8.47
1/1/2013	23:17:00	14.900	14.434	0.466	1.075	4.32	-0.715	8.58
1/1/2013	23:32:00	14.892	14.425	0.467	1.077	4.32	-0.717	8.61
1/1/2013	23:47:00	14.886	14.421	0.465	1.073	4.32	-0.713	8.55
1/2/2013	0:02:00	14.880	14.425	0.455	1.050	4.32	-0.690	8.28
1/2/2013	0:17:00	14.888	14.425	0.463	1.068	4.32	-0.708	8.50
1/2/2013	0:32:00	14.886	14.423	0.463	1.068	4.32	-0.708	8.50
1/2/2013	0:47:00	14.886	14.423	0.463	1.068	4.32	-0.708	8.50
1/2/2013	1:02:00	14.902	14.419	0.483	1.114	4.32	-0.754	9.05
1/2/2013	1:17:00	14.908	14.417	0.491	1.133	4.32	-0.773	9.27
1/2/2013	1:32:00	14.923	14.411	0.512	1.181	4.32	-0.821	9.85
1/2/2013	1:47:00	14.942	14.418	0.524	1.209	4.32	-0.849	10.19
1/2/2013	2:02:00	14.955	14.423	0.532	1.227	4.32	-0.867	10.41
1/2/2013	2:17:00	14.981	14.417	0.564	1.301	4.32	-0.941	11.29
1/2/2013	2:32:00	14.981	14.422	0.559	1.290	4.32	-0.930	11.16
1/2/2013	2:47:00	15.002	14.425	0.577	1.331	4.32	-0.971	11.65
1/2/2013	3:02:00	15.000	14.427	0.573	1.322	4.32	-0.962	11.54
1/2/2013	3:17:00	14.999	14.414	0.585	1.350	4.32	-0.990	11.88
1/2/2013	3:32:00	14.982	14.392	0.590	1.361	4.32	-1.001	12.01
1/2/2013	3:47:00	14.969	14.411	0.558	1.287	4.32	-0.927	11.13
1/2/2013	4:02:00	14.983	14.419	0.564	1.301	4.32	-0.941	11.29
1/2/2013	4:17:00	14.977	14.424	0.553	1.276	4.32	-0.916	10.99
1/2/2013	4:32:00	14.965	14.417	0.548	1.264	4.32	-0.904	10.85
1/2/2013	4:47:00	14.954	14.419	0.535	1.234	4.32	-0.874	10.49
1/2/2013	5:02:00	14.945	14.423	0.522	1.204	4.32	-0.844	10.13
1/2/2013	5:17:00	14.942	14.423	0.519	1.197	4.32	-0.837	10.05
1/2/2013	5:32:00	14.948	14.433	0.515	1.188	4.32	-0.828	9.94
1/2/2013	5:47:00	14.942	14.431	0.511	1.179	4.32	-0.819	9.83
1/2/2013	6:02:00	14.940	14.431	0.509	1.174	4.32	-0.814	9.77
1/2/2013	6:17:00	14.945	14.436	0.509	1.174	4.32	-0.814	9.77
1/2/2013	6:32:00	14.939	14.437	0.502	1.158	4.32	-0.798	9.58
1/2/2013	6:47:00	14.946	14.443	0.503	1.160	4.32	-0.800	9.61
1/2/2013	7:02:00	14.952	14.447	0.505	1.165	4.32	-0.805	9.66
1/2/2013	7:17:00	14.954	14.449	0.505	1.165	4.32	-0.805	9.66
1/2/2013	7:32:00	14.953	14.456	0.497	1.147	4.32	-0.787	9.44
1/2/2013	7:47:00	14.954	14.454	0.500	1.154	4.32	-0.794	9.52
1/2/2013	8:02:00	14.957	14.455	0.502	1.158	4.32	-0.798	9.58
1/2/2013	8:17:00	14.959	14.461	0.498	1.149	4.32	-0.789	9.47
1/2/2013	8:32:00	14.961	14.464	0.497	1.147	4.32	-0.787	9.44
1/2/2013	8:47:00	14.958	14.464	0.494	1.140	4.32	-0.780	9.36
1/2/2013	9:02:00	14.964	14.472	0.492	1.135	4.32	-0.775	9.30
1/2/2013	9:17:00	14.960	14.477	0.483	1.114	4.32	-0.754	9.05
1/2/2013	9:32:00	14.968	14.483	0.485	1.119	4.32	-0.759	9.11
1/2/2013	9:47:00	14.969	14.484	0.485	1.119	4.32	-0.759	9.11
1/2/2013	10:02:00	14.970	14.483	0.487	1.124	4.32	-0.764	9.16
1/2/2013	10:17:00	14.970	14.489	0.481	1.110	4.32	-0.750	9.00
1/2/2013	10:32:00	14.974	14.492	0.482	1.112	4.32	-0.752	9.02
1/2/2013	10:47:00	14.973	14.488	0.485	1.119	4.32	-0.759	9.11
1/2/2013	11:02:00	14.990	14.500	0.490	1.130	4.32	-0.770	9.25
1/2/2013	11:17:00	15.002	14.490	0.512	1.181	4.32	-0.821	9.85
1/2/2013	11:32:00	15.002	14.493	0.509	1.174	4.32	-0.814	9.77
1/2/2013	11:47:00	14.990	14.486	0.504	1.163	4.32	-0.803	9.63
1/2/2013	12:02:00	14.978	14.489	0.489	1.128	4.32	-0.768	9.22
1/2/2013	12:17:00	14.985	14.486	0.499	1.151	4.32	-0.791	9.49
1/2/2013	12:32:00	14.975	14.485	0.490	1.130	4.32	-0.770	9.25
1/2/2013	12:47:00	14.975	14.481	0.494	1.140	4.32	-0.780	9.36
1/2/2013	13:02:00	14.975	14.485	0.490	1.130	4.32	-0.770	9.25
1/2/2013	13:17:00	14.970	14.478	0.492	1.135	4.32	-0.775	9.30
1/2/2013	13:32:00	14.967	14.479	0.488	1.126	4.32	-0.766	9.19
1/2/2013	13:47:00	14.966	14.481	0.485	1.119	4.32	-0.759	9.11
1/2/2013	14:02:00	14.967	14.477	0.490	1.130	4.32	-0.770	9.25
1/2/2013	14:17:00	14.963	14.480	0.483	1.114	4.32	-0.754	9.05
1/2/2013	14:32:00	14.967	14.482	0.485	1.119	4.32	-0.759	9.11
1/2/2013	14:47:00	14.963	14.484	0.479	1.105	4.32	-0.745	8.94
1/2/2013	15:02:00	14.963	14.488	0.475	1.096	4.32	-0.736	8.83
1/2/2013	15:17:00	14.957	14.494	0.463	1.068	4.32	-0.708	8.50
1/2/2013	15:32:00	14.964	14.486	0.478	1.103	4.32	-0.743	8.91
1/2/2013	15:47:00	14.961	14.494	0.467	1.077	4.32	-0.717	8.61
1/2/2013	16:02:00	14.960	14.490	0.470	1.084	4.32	-0.724	8.69
1/2/2013	16:17:00	14.958	14.495	0.463	1.068	4.32	-0.708	8.50
1/2/2013	16:32:00	14.957	14.494	0.463	1.068	4.32	-0.708	8.50
1/2/2013	16:47:00	14.958	14.498	0.460	1.061	4.32	-0.701	8.41
1/2/2013	17:02:00	14.960	14.495	0.465	1.073	4.32	-0.713	8.55
1/2/2013	17:17:00	14.950	14.500	0.450	1.038	4.32	-0.678	8.14
1/2/2013	17:32:00	14.957	14.501	0.456	1.052	4.32	-0.692	8.30
1/2/2013	17:47:00	14.963	14.509	0.454	1.047	4.32	-0.687	8.25
1/2/2013	18:02:00	14.962	14.498	0.464	1.070	4.32	-0.710	8.53
1/2/2013	18:17:00	14.959	14.501	0.458	1.057	4.32	-0.697	8.36
1/2/2013	18:32:00	14.959	14.508	0.451	1.040	4.32	-0.680	8.17
1/2/2013	18:47:00	14.964	14.507	0.457	1.054	4.32	-0.694	8.33
1/2/2013	19:02:00	14.966	14.505	0.461	1.064	4.32	-0.704	8.44
1/2/2013	19:17:00	14.967	14.524	0.443	1.022	4.32	-0.662	7.94
1/2/2013	19:32:00	14.953	14.497	0.456	1.052	4.32	-0.692	8.30
1/2/2013	19:47:00	14.955	14.524	0.431	0.994	4.32	-0.634	7.61
1/2/2013	20:02:00	14.956	14.507	0.449	1.036	4.32	-0.676	8.11
1/2/2013	20:17:00	14.948	14.519	0.429	0.990	4.32	-0.630	7.56
1/2/2013	20:32:00	14.945	14.530	0.415	0.957	4.32	-0.597	7.17
1/2/2013	20:47:00	14.944	14.524	0.420	0.969	4.32	-0.609	7.31
1/2/2013	21:02:00	14.939	14.531	0.408	0.941	4.32	-0.581	6.98
1/2/2013	21:17:00	14.937	14.505	0.432	0.997	4.32	-0.637	7.64
1/2/2013	21:32:00	14.937	14.526	0.411	0.948	4.32	-0.588	7.06
1/2/2013	21:47:00	14.935	14.524	0.411	0.948	4.32	-0.588	7.06
1/2/2013	22:02:00	14.937	14.542	0.395	0.911	4.32	-0.551	6.62
1/2/2013	22:17:00	14.933	14.539	0.394	0.909	4.32	-0.549	6.59
1/2/2013	22:32:00	14.930	14.532	0.398	0.918	4.32	-0.558	6.70
1/2/2013	22:47:00	14.936	14.527	0.409	0.944	4.32	-0.584	7.00
1/2/2013	23:02:00	14.932	14.542	0.390	0.900	4.32	-0.540	6.48
1/2/2013	23:17:00	14.925	14.537	0.388	0.895	4.32	-0.535	6.42
1/2/2013	23:32:00	14.925	14.526	0.399	0.920	4.32	-0.560	6.73
1/2/2013	23:47:00	14.918	14.538	0.380	0.877	4.32	-0.517	6.20
1/3/2013	0:02:00	14.915	14.523	0.392	0.904	4.32	-0.544	6.53
1/3/2013	0:17:00	14.905	14.520	0.385	0.888	4.32	-0.528	6.34
1/3/2013	0:32:00	14.910	14.510	0.400	0.923	4.32	-0.563	6.75
1/3/2013	0:47:00	14.907	14.513	0.394	0.909	4.32	-0.549	6.59
1/3/2013	1:02:00	14.903	14.509	0.394	0.909	4.32	-0.549	6.59
1/3/2013	1:17:00	14.904	14.512	0.392	0.904	4.32	-0.544	6.53
1/3/2013	1:32:00	14.910	14.517	0.393	0.907	4.32	-0.547	6.56
1/3/2013	1:47:00	14.910	14.520	0.390	0.900	4.32	-0.540	6.48
1/3/2013	2:02:00	14.906	14.520	0.386	0.891	4.32	-0.531	6.37
1/3/2013	2:17:00	14.900	14.523	0.377	0.870	4.32	-0.510	6.12
1/3/2013	2:32:00	14.908	14.513	0.395	0.911	4.32	-0.551	6.62
1/3/2013	2:47:00	14.904	14.520	0.384	0.886	4.32	-0.526	6.31

1/3/2013	3:02:00	14.906	14.520	0.386	0.891	4.32	-0.531	6.37
1/3/2013	3:17:00	14.910	14.532	0.378	0.872	4.32	-0.512	6.14
1/3/2013	3:32:00	14.908	14.532	0.376	0.867	4.32	-0.507	6.09
1/3/2013	3:47:00	14.912	14.525	0.387	0.893	4.32	-0.533	6.39
1/3/2013	4:02:00	14.904	14.524	0.380	0.877	4.32	-0.517	6.20
1/3/2013	4:17:00	14.904	14.519	0.385	0.888	4.32	-0.528	6.34
1/3/2013	4:32:00	14.904	14.531	0.373	0.861	4.32	-0.501	6.01
1/3/2013	4:47:00	14.906	14.526	0.380	0.877	4.32	-0.517	6.20
1/3/2013	5:02:00	14.901	14.533	0.368	0.849	4.32	-0.489	5.87
1/3/2013	5:17:00	14.903	14.523	0.380	0.877	4.32	-0.517	6.20
1/3/2013	5:32:00	14.896	14.521	0.375	0.865	4.32	-0.505	6.06
1/3/2013	5:47:00	14.894	14.519	0.375	0.865	4.32	-0.505	6.06
1/3/2013	6:02:00	14.876	14.523	0.353	0.814	4.32	-0.454	5.45
1/3/2013	6:17:00	14.889	14.526	0.363	0.837	4.32	-0.477	5.73
1/3/2013	6:32:00	14.886	14.532	0.354	0.817	4.32	-0.457	5.48
1/3/2013	6:47:00	14.881	14.526	0.355	0.819	4.32	-0.459	5.51
1/3/2013	7:02:00	14.876	14.530	0.346	0.798	4.32	-0.438	5.26
1/3/2013	7:17:00	14.877	14.529	0.348	0.803	4.32	-0.443	5.31
1/3/2013	7:32:00	14.874	14.524	0.350	0.807	4.32	-0.447	5.37
1/3/2013	7:47:00	14.879	14.526	0.353	0.814	4.32	-0.454	5.45
1/3/2013	8:02:00	14.885	14.535	0.350	0.807	4.32	-0.447	5.37
1/3/2013	8:17:00	14.875	14.541	0.334	0.771	4.32	-0.411	4.93
1/3/2013	8:32:00	14.884	14.548	0.336	0.775	4.32	-0.415	4.98
1/3/2013	8:47:00	14.884	14.541	0.343	0.791	4.32	-0.431	5.18
1/3/2013	9:02:00	14.886	14.553	0.333	0.768	4.32	-0.408	4.90
1/3/2013	9:17:00	14.896	14.556	0.340	0.784	4.32	-0.424	5.09
1/3/2013	9:32:00	14.884	14.548	0.336	0.775	4.32	-0.415	4.98
1/3/2013	9:47:00	14.888	14.555	0.333	0.768	4.32	-0.408	4.90
1/3/2013	10:02:00	14.888	14.542	0.346	0.798	4.32	-0.438	5.26
1/3/2013	10:17:00	14.885	14.556	0.329	0.759	4.32	-0.399	4.79
1/3/2013	10:32:00	14.891	14.549	0.342	0.789	4.32	-0.429	5.15
1/3/2013	10:47:00	14.893	14.550	0.343	0.791	4.32	-0.431	5.18
1/3/2013	11:02:00	14.887	14.550	0.337	0.777	4.32	-0.417	5.01
1/3/2013	11:17:00	14.889	14.563	0.326	0.752	4.32	-0.392	4.70
1/3/2013	11:32:00	14.885	14.556	0.329	0.759	4.32	-0.399	4.79
1/3/2013	11:47:00	14.883	14.551	0.332	0.766	4.32	-0.406	4.87
1/3/2013	12:02:00	14.879	14.532	0.347	0.801	4.32	-0.441	5.29
1/3/2013	12:17:00	14.874	14.526	0.348	0.803	4.32	-0.443	5.31
1/3/2013	12:32:00	14.867	14.528	0.339	0.782	4.32	-0.422	5.06
1/3/2013	12:47:00	14.867	14.522	0.345	0.796	4.32	-0.436	5.23
1/3/2013	13:02:00	14.865	14.527	0.338	0.780	4.32	-0.420	5.04
1/3/2013	13:17:00	14.863	14.528	0.335	0.773	4.32	-0.413	4.95
1/3/2013	13:32:00	14.860	14.547	0.313	0.722	4.32	-0.362	4.35
1/3/2013	13:47:00	14.865	14.520	0.345	0.796	4.32	-0.436	5.23
1/3/2013	14:02:00	14.857	14.541	0.316	0.729	4.32	-0.369	4.43
1/3/2013	14:17:00	14.862	14.540	0.322	0.743	4.32	-0.383	4.59
1/3/2013	14:32:00	14.861	14.544	0.317	0.731	4.32	-0.371	4.46
1/3/2013	14:47:00	14.860	14.544	0.316	0.729	4.32	-0.369	4.43
1/3/2013	15:02:00	14.858	14.522	0.336	0.775	4.32	-0.415	4.98
1/3/2013	15:17:00	14.867	14.529	0.338	0.780	4.32	-0.420	5.04
1/3/2013	15:32:00	14.870	14.543	0.327	0.754	4.32	-0.394	4.73
1/3/2013	15:47:00	14.865	14.535	0.330	0.761	4.32	-0.401	4.82
1/3/2013	16:02:00	14.875	14.541	0.334	0.771	4.32	-0.411	4.93
1/3/2013	16:17:00	14.870	14.540	0.330	0.761	4.32	-0.401	4.82
1/3/2013	16:32:00	14.878	14.542	0.336	0.775	4.32	-0.415	4.98
1/3/2013	16:47:00	14.881	14.553	0.328	0.757	4.32	-0.397	4.76
1/3/2013	17:02:00	14.879	14.545	0.334	0.771	4.32	-0.411	4.93
1/3/2013	17:17:00	14.879	14.552	0.327	0.754	4.32	-0.394	4.73
1/3/2013	17:32:00	14.884	14.556	0.328	0.757	4.32	-0.397	4.76
1/3/2013	17:47:00	14.890	14.560	0.330	0.761	4.32	-0.401	4.82
1/3/2013	18:02:00	14.895	14.563	0.332	0.766	4.32	-0.406	4.87
1/3/2013	18:17:00	14.886	14.563	0.323	0.745	4.32	-0.385	4.62
1/3/2013	18:32:00	14.893	14.562	0.331	0.764	4.32	-0.404	4.84
1/3/2013	18:47:00	14.887	14.563	0.324	0.747	4.32	-0.387	4.65
1/3/2013	19:02:00	14.893	14.573	0.320	0.738	4.32	-0.378	4.54
1/3/2013	19:17:00	14.893	14.578	0.315	0.727	4.32	-0.367	4.40
1/3/2013	19:32:00	14.903	14.579	0.324	0.747	4.32	-0.387	4.65
1/3/2013	19:47:00	14.898	14.576	0.322	0.743	4.32	-0.383	4.59
1/3/2013	20:02:00	14.893	14.581	0.312	0.720	4.32	-0.360	4.32
1/3/2013	20:17:00	14.895	14.584	0.311	0.717	4.32	-0.357	4.29
1/3/2013	20:32:00	14.894	14.576	0.318	0.734	4.32	-0.374	4.48
1/3/2013	20:47:00	14.908	14.578	0.330	0.761	4.32	-0.401	4.82
1/3/2013	21:02:00	14.899	14.586	0.313	0.722	4.32	-0.362	4.35
1/3/2013	21:17:00	14.907	14.582	0.325	0.750	4.32	-0.390	4.68
1/3/2013	21:32:00	14.897	14.577	0.320	0.738	4.32	-0.378	4.54
1/3/2013	21:47:00	14.915	14.600	0.315	0.727	4.32	-0.367	4.40
1/3/2013	22:02:00	14.903	14.588	0.315	0.727	4.32	-0.367	4.40
1/3/2013	22:17:00	14.914	14.603	0.311	0.717	4.32	-0.357	4.29
1/3/2013	22:32:00	14.906	14.598	0.308	0.711	4.32	-0.351	4.21
1/3/2013	22:47:00	14.907	14.580	0.327	0.754	4.32	-0.394	4.73
1/3/2013	23:02:00	14.907	14.602	0.305	0.704	4.32	-0.344	4.12
1/3/2013	23:17:00	14.910	14.592	0.318	0.734	4.32	-0.374	4.48
1/3/2013	23:32:00	14.906	14.592	0.314	0.724	4.32	-0.364	4.37
1/3/2013	23:47:00	14.907	14.606	0.301	0.694	4.32	-0.334	4.01
1/4/2013	0:02:00	14.907	14.598	0.309	0.713	4.32	-0.353	4.23
1/4/2013	0:17:00	14.904	14.584	0.320	0.738	4.32	-0.378	4.54
1/4/2013	0:32:00	14.907	14.597	0.310	0.715	4.32	-0.355	4.26
1/4/2013	0:47:00	14.902	14.587	0.315	0.727	4.32	-0.367	4.40
1/4/2013	1:02:00	14.898	14.594	0.304	0.701	4.32	-0.341	4.10
1/4/2013	1:17:00	14.901	14.597	0.304	0.701	4.32	-0.341	4.10
1/4/2013	1:32:00	14.905	14.579	0.326	0.752	4.32	-0.392	4.70
1/4/2013	1:47:00	14.907	14.611	0.296	0.683	4.32	-0.323	3.87
1/4/2013	2:02:00	14.917	14.604	0.313	0.722	4.32	-0.362	4.35
1/4/2013	2:17:00	14.911	14.612	0.299	0.690	4.32	-0.330	3.96
1/4/2013	2:32:00	14.906	14.600	0.306	0.706	4.32	-0.346	4.15
1/4/2013	2:47:00	14.913	14.610	0.303	0.699	4.32	-0.339	4.07
1/4/2013	3:02:00	14.910	14.602	0.308	0.711	4.32	-0.351	4.21
1/4/2013	3:17:00	14.905	14.583	0.322	0.743	4.32	-0.383	4.59
1/4/2013	3:32:00	14.906	14.595	0.311	0.717	4.32	-0.357	4.29
1/4/2013	3:47:00	14.905	14.592	0.313	0.722	4.32	-0.362	4.35
1/4/2013	4:02:00	14.900	14.604	0.296	0.683	4.32	-0.323	3.87
1/4/2013	4:17:00	14.903	14.592	0.311	0.717	4.32	-0.357	4.29
1/4/2013	4:32:00	14.899	14.607	0.292	0.674	4.32	-0.314	3.76
1/4/2013	4:47:00	14.901	14.605	0.296	0.683	4.32	-0.323	3.87
1/4/2013	5:02:00	14.901	14.601	0.300	0.692	4.32	-0.332	3.99
1/4/2013	5:17:00	14.903	14.584	0.319	0.736	4.32	-0.376	4.51
1/4/2013	5:32:00	14.901	14.605	0.296	0.683	4.32	-0.323	3.87
1/4/2013	5:47:00	14.906	14.601	0.305	0.704	4.32	-0.344	4.12
1/4/2013	6:02:00	14.905	14.588	0.317	0.731	4.32	-0.371	4.46
1/4/2013	6:17:00	14.906	14.602	0.304	0.701	4.32	-0.341	4.10
1/4/2013	6:32:00	14.910	14.620	0.290	0.669	4.32	-0.309	3.71
1/4/2013	6:47:00	14.905	14.613	0.292	0.674	4.32	-0.314	3.76
1/4/2013	7:02:00	14.906	14.612	0.294	0.678	4.32	-0.318	3.82
1/4/2013	7:17:00	14.907	14.601	0.306	0.706	4.32	-0.346	4.15
1/4/2013	7:32:00	14.912	14.619	0.293	0.676	4.32	-0.316	3.79
1/4/2013	7:47:00	14.913	14.612	0.301	0.694	4.32	-0.334	4.01
1/4/2013	8:02:00	14.913	14.614	0.299	0.690	4.32	-0.330	3.96
1/4/2013	8:17:00	14.914	14.616	0.298	0.687	4.32	-0.327	3.93
1/4/2013	8:32:00	14.910	14.624	0.286	0.660	4.32	-0.300	3.60
1/4/2013	8:47:00	14.921	14.626	0.295	0.681	4.32	-0.321	3.85
1/4/2013	9:02:00	14.915	14.612	0.303	0.699	4.32	-0.339	4.07
1/4/2013	9:17:00	14.926	14.629	0.297	0.685	4.32	-0.325	3.90
1/4/2013	9:32:00	14.920	14.617	0.303	0.699	4.32	-0.339	4.07
1/4/2013	9:47:00	14.918	14.627	0.291	0.671	4.32	-0.311	3.74
1/4/2013	10:02:00	14.918	14.625	0.293	0.676	4.32	-0.316	3.79
1/4/2013	10:17:00	14.938	14.629	0.309	0.713	4.32	-0.353	4.23
1/4/2013	10:32:00	14.916	14.621	0.295	0.681	4.32	-0.321	3.85
1/4/2013	10:47:00	14.922	14.617	0.305	0.704	4.32	-0.344	4.12
1/4/2013	11:02:00	14.925	14.613	0.312	0.720	4.32	-0.360	4.32
1/4/2013	11:17:00	14.921	14.612	0.309	0.713	4.32	-0.353	4.23
1/4/2013	11:32:00	14.912	14.608	0.304	0.701	4.32	-0.341	4.10
1/4/2013	11:47:00	14.908	14.603	0.305	0.704	4.32	-0.344	4.12
1/4/2013	12:02:00	14.907	14.601	0.306	0.706	4.32	-0.346	4.15

1/4/2013	12:17:00	14.906	14.601	0.305	0.704	4.32	-0.344	4.12
1/4/2013	12:32:00	14.902	14.597	0.305	0.704	4.32	-0.344	4.12
1/4/2013	12:47:00	14.903	14.585	0.318	0.734	4.32	-0.374	4.48
1/4/2013	13:02:00	14.889	14.590	0.299	0.690	4.32	-0.330	3.96
1/4/2013	13:17:00	14.885	14.582	0.303	0.699	4.32	-0.339	4.07
1/4/2013	13:32:00	14.886	14.578	0.308	0.711	4.32	-0.351	4.21
1/4/2013	13:47:00	14.874	14.570	0.304	0.701	4.32	-0.341	4.10
1/4/2013	14:02:00	14.877	14.569	0.308	0.711	4.32	-0.351	4.21
1/4/2013	14:17:00	14.873	14.568	0.305	0.704	4.32	-0.344	4.12
1/4/2013	14:32:00	14.864	14.565	0.299	0.690	4.32	-0.330	3.96
1/4/2013	14:47:00	14.863	14.565	0.298	0.687	4.32	-0.327	3.93
1/4/2013	15:02:00	14.862	14.571	0.291	0.671	4.32	-0.311	3.74
1/4/2013	15:17:00	14.871	14.562	0.309	0.713	4.32	-0.353	4.23
1/4/2013	15:32:00	14.867	14.572	0.295	0.681	4.32	-0.321	3.85
1/4/2013	15:47:00	14.872	14.572	0.300	0.692	4.32	-0.332	3.99
1/4/2013	16:02:00	14.874	14.570	0.304	0.701	4.32	-0.341	4.10
1/4/2013	16:17:00	14.871	14.566	0.305	0.704	4.32	-0.344	4.12
1/4/2013	16:32:00	14.872	14.566	0.306	0.706	4.32	-0.346	4.15
1/4/2013	16:47:00	14.868	14.572	0.296	0.683	4.32	-0.323	3.87
1/4/2013	17:02:00	14.867	14.565	0.302	0.697	4.32	-0.337	4.04
1/4/2013	17:17:00	14.866	14.573	0.293	0.676	4.32	-0.316	3.79
1/4/2013	17:32:00	14.869	14.573	0.296	0.683	4.32	-0.323	3.87
1/4/2013	17:47:00	14.876	14.583	0.293	0.676	4.32	-0.316	3.79
1/4/2013	18:02:00	14.880	14.583	0.297	0.685	4.32	-0.325	3.90
1/4/2013	18:17:00	14.879	14.580	0.299	0.690	4.32	-0.330	3.96
1/4/2013	18:32:00	14.877	14.588	0.289	0.667	4.32	-0.307	3.68
1/4/2013	18:47:00	14.882	14.587	0.295	0.681	4.32	-0.321	3.85
1/4/2013	19:02:00	14.883	14.594	0.289	0.667	4.32	-0.307	3.68
1/4/2013	19:17:00	14.892	14.591	0.301	0.694	4.32	-0.334	4.01
1/4/2013	19:32:00	14.888	14.595	0.293	0.676	4.32	-0.316	3.79
1/4/2013	19:47:00	14.901	14.599	0.302	0.697	4.32	-0.337	4.04
1/4/2013	20:02:00	14.899	14.592	0.307	0.708	4.32	-0.348	4.18
1/4/2013	20:17:00	14.890	14.600	0.290	0.669	4.32	-0.309	3.71
1/4/2013	20:32:00	14.890	14.604	0.286	0.660	4.32	-0.300	3.60
1/4/2013	20:47:00	14.893	14.599	0.294	0.678	4.32	-0.318	3.82
1/4/2013	21:02:00	14.903	14.614	0.289	0.667	4.32	-0.307	3.68
1/4/2013	21:17:00	14.901	14.626	0.275	0.634	4.32	-0.274	3.29
1/4/2013	21:32:00	14.902	14.626	0.276	0.637	4.32	-0.277	3.32
1/4/2013	21:47:00	14.905	14.617	0.288	0.664	4.32	-0.304	3.65
1/4/2013	22:02:00	14.900	14.602	0.298	0.687	4.32	-0.327	3.93
1/4/2013	22:17:00	14.903	14.617	0.286	0.660	4.32	-0.300	3.60
1/4/2013	22:32:00	14.907	14.623	0.284	0.655	4.32	-0.295	3.54
1/4/2013	22:47:00	14.908	14.605	0.303	0.699	4.32	-0.339	4.07
1/4/2013	23:02:00	14.902	14.628	0.274	0.632	4.32	-0.272	3.27
1/4/2013	23:17:00	14.909	14.604	0.305	0.704	4.32	-0.344	4.12
1/4/2013	23:32:00	14.900	14.621	0.279	0.644	4.32	-0.284	3.40
1/4/2013	23:47:00	14.907	14.626	0.281	0.648	4.32	-0.288	3.46
1/5/2013	0:02:00	14.899	14.612	0.287	0.662	4.32	-0.302	3.63
1/5/2013	0:17:00	14.906	14.623	0.283	0.653	4.32	-0.293	3.51
1/5/2013	0:32:00	14.903	14.600	0.303	0.699	4.32	-0.339	4.07
1/5/2013	0:47:00	14.901	14.611	0.290	0.669	4.32	-0.309	3.71
1/5/2013	1:02:00	14.901	14.626	0.275	0.634	4.32	-0.274	3.29
1/5/2013	1:17:00	14.895	14.600	0.295	0.681	4.32	-0.321	3.85
1/5/2013	1:32:00	14.898	14.601	0.297	0.685	4.32	-0.325	3.90
1/5/2013	1:47:00	14.898	14.624	0.274	0.632	4.32	-0.272	3.27
1/5/2013	2:02:00	14.902	14.610	0.292	0.674	4.32	-0.314	3.76
1/5/2013	2:17:00	14.903	14.609	0.294	0.678	4.32	-0.318	3.82
1/5/2013	2:32:00	14.905	14.640	0.265	0.611	4.32	-0.251	3.02
1/5/2013	2:47:00	14.912	14.626	0.286	0.660	4.32	-0.300	3.60
1/5/2013	3:02:00	14.907	14.634	0.273	0.630	4.32	-0.270	3.24
1/5/2013	3:17:00	14.907	14.627	0.280	0.646	4.32	-0.286	3.43
1/5/2013	3:32:00	14.907	14.635	0.272	0.628	4.32	-0.268	3.21
1/5/2013	3:47:00	14.907	14.605	0.302	0.697	4.32	-0.337	4.04
1/5/2013	4:02:00	14.898	14.619	0.279	0.644	4.32	-0.284	3.40
1/5/2013	4:17:00	14.901	14.617	0.284	0.655	4.32	-0.295	3.54
1/5/2013	4:32:00	14.904	14.630	0.274	0.632	4.32	-0.272	3.27
1/5/2013	4:47:00	14.899	14.632	0.267	0.616	4.32	-0.256	3.07
1/5/2013	5:02:00	14.902	14.608	0.294	0.678	4.32	-0.318	3.82
1/5/2013	5:17:00	14.904	14.618	0.286	0.660	4.32	-0.300	3.60
1/5/2013	5:32:00	14.901	14.616	0.285	0.657	4.32	-0.297	3.57
1/5/2013	5:47:00	14.900	14.615	0.285	0.657	4.32	-0.297	3.57
1/5/2013	6:02:00	14.897	14.621	0.276	0.637	4.32	-0.277	3.32
1/5/2013	6:17:00	14.900	14.624	0.276	0.637	4.32	-0.277	3.32
1/5/2013	6:32:00	14.908	14.627	0.281	0.648	4.32	-0.288	3.46
1/5/2013	6:47:00	14.904	14.637	0.267	0.616	4.32	-0.256	3.07
1/5/2013	7:02:00	14.906	14.621	0.285	0.657	4.32	-0.297	3.57
1/5/2013	7:17:00	14.912	14.642	0.270	0.623	4.32	-0.263	3.15
1/5/2013	7:32:00	14.913	14.631	0.282	0.651	4.32	-0.291	3.49
1/5/2013	7:47:00	14.913	14.638	0.275	0.634	4.32	-0.274	3.29
1/5/2013	8:02:00	14.924	14.633	0.291	0.671	4.32	-0.311	3.74
1/5/2013	8:17:00	14.925	14.644	0.281	0.648	4.32	-0.288	3.46
1/5/2013	8:32:00	14.919	14.641	0.278	0.641	4.32	-0.281	3.38
1/5/2013	8:47:00	14.932	14.661	0.271	0.625	4.32	-0.265	3.18
1/5/2013	9:02:00	14.931	14.661	0.270	0.623	4.32	-0.263	3.15
1/5/2013	9:17:00	14.936	14.646	0.290	0.669	4.32	-0.309	3.71
1/5/2013	9:32:00	14.933	14.649	0.284	0.655	4.32	-0.295	3.54
1/5/2013	9:47:00	14.935	14.657	0.278	0.641	4.32	-0.281	3.38
1/5/2013	10:02:00	14.934	14.654	0.280	0.646	4.32	-0.286	3.43
1/5/2013	10:17:00	14.932	14.655	0.277	0.639	4.32	-0.279	3.35
1/5/2013	10:32:00	14.943	14.653	0.290	0.669	4.32	-0.309	3.71
1/5/2013	10:47:00	14.942	14.648	0.294	0.678	4.32	-0.318	3.82
1/5/2013	11:02:00	14.929	14.645	0.284	0.655	4.32	-0.295	3.54
1/5/2013	11:17:00	14.931	14.642	0.289	0.667	4.32	-0.307	3.68
1/5/2013	11:32:00	14.931	14.636	0.295	0.681	4.32	-0.321	3.85
1/5/2013	11:47:00	14.925	14.633	0.292	0.674	4.32	-0.314	3.76
1/5/2013	12:02:00	14.920	14.627	0.293	0.676	4.32	-0.316	3.79
1/5/2013	12:17:00	14.913	14.618	0.295	0.681	4.32	-0.321	3.85
1/5/2013	12:32:00	14.909	14.622	0.287	0.662	4.32	-0.302	3.63
1/5/2013	12:47:00	14.908	14.618	0.290	0.669	4.32	-0.309	3.71
1/5/2013	13:02:00	14.901	14.612	0.289	0.667	4.32	-0.307	3.68
1/5/2013	13:17:00	14.904	14.604	0.300	0.692	4.32	-0.332	3.99
1/5/2013	13:32:00	14.892	14.601	0.291	0.671	4.32	-0.311	3.74
1/5/2013	13:47:00	14.881	14.600	0.281	0.648	4.32	-0.288	3.46
1/5/2013	14:02:00	14.887	14.598	0.289	0.667	4.32	-0.307	3.68
1/5/2013	14:17:00	14.883	14.596	0.287	0.662	4.32	-0.302	3.63
1/5/2013	14:32:00	14.881	14.593	0.288	0.664	4.32	-0.304	3.65
1/5/2013	14:47:00	14.876	14.594	0.282	0.651	4.32	-0.291	3.49
1/5/2013	15:02:00	14.884	14.599	0.285	0.657	4.32	-0.297	3.57
1/5/2013	15:17:00	14.887	14.596	0.291	0.671	4.32	-0.311	3.74
1/5/2013	15:32:00	14.887	14.602	0.285	0.657	4.32	-0.297	3.57
1/5/2013	15:47:00	14.887	14.608	0.279	0.644	4.32	-0.284	3.40
1/5/2013	16:02:00	14.883	14.599	0.284	0.655	4.32	-0.295	3.54
1/5/2013	16:17:00	14.881	14.599	0.282	0.651	4.32	-0.291	3.49
1/5/2013	16:32:00	14.882	14.600	0.282	0.651	4.32	-0.291	3.49
1/5/2013	16:47:00	14.879	14.589	0.290	0.669	4.32	-0.309	3.71
1/5/2013	17:02:00	14.879	14.592	0.287	0.662	4.32	-0.302	3.63
1/5/2013	17:17:00	14.877	14.589	0.288	0.664	4.32	-0.304	3.65
1/5/2013	17:32:00	14.883	14.589	0.294	0.678	4.32	-0.318	3.82
1/5/2013	17:47:00	14.881	14.590	0.291	0.671	4.32	-0.311	3.74
1/5/2013	18:02:00	14.878	14.597	0.281	0.648	4.32	-0.288	3.46
1/5/2013	18:17:00	14.885	14.603	0.282	0.651	4.32	-0.291	3.49
1/5/2013	18:32:00	14.880	14.596	0.284	0.655	4.32	-0.295	3.54
1/5/2013	18:47:00	14.885	14.598	0.287	0.662	4.32	-0.302	3.63
1/5/2013	19:02:00	14.880	14.597	0.283	0.653	4.32	-0.293	3.51
1/5/2013	19:17:00	14.887	14.604	0.283	0.653	4.32	-0.293	3.51
1/5/2013	19:32:00	14.885	14.599	0.286	0.660	4.32	-0.300	3.60
1/5/2013	19:47:00	14.880	14.603	0.277	0.639	4.32	-0.279	3.35
1/5/2013	20:02:00	14.877	14.592	0.285	0.657	4.32	-0.297	3.57
1/5/2013	20:17:00	14.874	14.605	0.269	0.621	4.32	-0.261	3.13
1/5/2013	20:32:00	14.883	14.606	0.277	0.639	4.32	-0.279	3.35
1/5/2013	20:47:00	14.888	14.591	0.297	0.685	4.32	-0.325	3.90
1/5/2013	21:02:00	14.882	14.599	0.283	0.653	4.32	-0.293	3.51
1/5/2013	21:17:00	14.882	14.595	0.287	0.662	4.32	-0.302	3.63

1/5/2013	21:32:00	14.882	14.603	0.279	0.644	4.32	-0.284	3.40
1/5/2013	21:47:00	14.883	14.606	0.277	0.639	4.32	-0.279	3.35
1/5/2013	22:02:00	14.888	14.598	0.290	0.669	4.32	-0.309	3.71
1/5/2013	22:17:00	14.881	14.602	0.279	0.644	4.32	-0.284	3.40
1/5/2013	22:32:00	14.875	14.603	0.272	0.628	4.32	-0.268	3.21
1/5/2013	22:47:00	14.882	14.598	0.284	0.655	4.32	-0.295	3.54
1/5/2013	23:02:00	14.868	14.593	0.275	0.634	4.32	-0.274	3.29
1/5/2013	23:17:00	14.872	14.583	0.289	0.667	4.32	-0.307	3.68
1/5/2013	23:32:00	14.868	14.574	0.294	0.678	4.32	-0.318	3.82
1/5/2013	23:47:00	14.857	14.574	0.283	0.653	4.32	-0.293	3.51
1/6/2013	0:02:00	14.857	14.566	0.291	0.671	4.32	-0.311	3.74
1/6/2013	0:17:00	14.857	14.567	0.290	0.669	4.32	-0.309	3.71
1/6/2013	0:32:00	14.846	14.563	0.283	0.653	4.32	-0.293	3.51
1/6/2013	0:47:00	14.847	14.565	0.282	0.651	4.32	-0.291	3.49
1/6/2013	1:02:00	14.846	14.567	0.279	0.644	4.32	-0.284	3.40
1/6/2013	1:17:00	14.844	14.562	0.282	0.651	4.32	-0.291	3.49
1/6/2013	1:32:00	14.845	14.567	0.278	0.641	4.32	-0.281	3.38
1/6/2013	1:47:00	14.843	14.565	0.278	0.641	4.32	-0.281	3.38
1/6/2013	2:02:00	14.853	14.567	0.286	0.660	4.32	-0.300	3.60
1/6/2013	2:17:00	14.851	14.567	0.284	0.655	4.32	-0.295	3.54
1/6/2013	2:32:00	14.845	14.570	0.275	0.634	4.32	-0.274	3.29
1/6/2013	2:47:00	14.849	14.559	0.290	0.669	4.32	-0.309	3.71
1/6/2013	3:02:00	14.844	14.568	0.276	0.637	4.32	-0.277	3.32
1/6/2013	3:17:00	14.844	14.562	0.282	0.651	4.32	-0.291	3.49
1/6/2013	3:32:00	14.840	14.555	0.285	0.657	4.32	-0.297	3.57
1/6/2013	3:47:00	14.832	14.553	0.279	0.644	4.32	-0.284	3.40
1/6/2013	4:02:00	14.829	14.554	0.275	0.634	4.32	-0.274	3.29
1/6/2013	4:17:00	14.840	14.551	0.289	0.667	4.32	-0.307	3.68
1/6/2013	4:32:00	14.836	14.549	0.287	0.662	4.32	-0.302	3.63
1/6/2013	4:47:00	14.826	14.543	0.283	0.653	4.32	-0.293	3.51
1/6/2013	5:02:00	14.822	14.547	0.275	0.634	4.32	-0.274	3.29
1/6/2013	5:17:00	14.818	14.539	0.279	0.644	4.32	-0.284	3.40
1/6/2013	5:32:00	14.822	14.539	0.283	0.653	4.32	-0.293	3.51
1/6/2013	5:47:00	14.810	14.537	0.273	0.630	4.32	-0.270	3.24
1/6/2013	6:02:00	14.813	14.539	0.274	0.632	4.32	-0.272	3.27
1/6/2013	6:17:00	14.815	14.539	0.276	0.637	4.32	-0.277	3.32
1/6/2013	6:32:00	14.814	14.536	0.278	0.641	4.32	-0.281	3.38
1/6/2013	6:47:00	14.824	14.540	0.284	0.655	4.32	-0.295	3.54
1/6/2013	7:02:00	14.810	14.539	0.271	0.625	4.32	-0.265	3.18
1/6/2013	7:17:00	14.819	14.542	0.277	0.639	4.32	-0.279	3.35
1/6/2013	7:32:00	14.820	14.547	0.273	0.630	4.32	-0.270	3.24
1/6/2013	7:47:00	14.819	14.547	0.272	0.628	4.32	-0.268	3.21
1/6/2013	8:02:00	14.826	14.548	0.278	0.641	4.32	-0.281	3.38
1/6/2013	8:17:00	14.832	14.544	0.288	0.664	4.32	-0.304	3.65
1/6/2013	8:32:00	14.822	14.550	0.272	0.628	4.32	-0.268	3.21
1/6/2013	8:47:00	14.830	14.556	0.274	0.632	4.32	-0.272	3.27
1/6/2013	9:02:00	14.836	14.552	0.284	0.655	4.32	-0.295	3.54
1/6/2013	9:17:00	14.820	14.551	0.269	0.621	4.32	-0.261	3.13
1/6/2013	9:32:00	14.830	14.554	0.276	0.637	4.32	-0.277	3.32
1/6/2013	9:47:00	14.820	14.555	0.265	0.611	4.32	-0.251	3.02
1/6/2013	10:02:00	14.827	14.552	0.275	0.634	4.32	-0.274	3.29
1/6/2013	10:17:00	14.825	14.553	0.272	0.628	4.32	-0.268	3.21
1/6/2013	10:32:00	14.826	14.549	0.277	0.639	4.32	-0.279	3.35
1/6/2013	10:47:00	14.822	14.546	0.276	0.637	4.32	-0.277	3.32
1/6/2013	11:02:00	14.816	14.540	0.276	0.637	4.32	-0.277	3.32
1/6/2013	11:17:00	14.815	14.537	0.278	0.641	4.32	-0.281	3.38
1/6/2013	11:32:00	14.809	14.534	0.275	0.634	4.32	-0.274	3.29
1/6/2013	11:47:00	14.805	14.526	0.279	0.644	4.32	-0.284	3.40
1/6/2013	12:02:00	14.804	14.517	0.287	0.662	4.32	-0.302	3.63
1/6/2013	12:17:00	14.798	14.523	0.275	0.634	4.32	-0.274	3.29
1/6/2013	12:32:00	14.800	14.523	0.277	0.639	4.32	-0.279	3.35
1/6/2013	12:47:00	14.794	14.512	0.282	0.651	4.32	-0.291	3.49
1/6/2013	13:02:00	14.790	14.517	0.273	0.630	4.32	-0.270	3.24
1/6/2013	13:17:00	14.779	14.506	0.273	0.630	4.32	-0.270	3.24
1/6/2013	13:32:00	14.781	14.495	0.286	0.660	4.32	-0.300	3.60
1/6/2013	13:47:00	14.778	14.503	0.275	0.634	4.32	-0.274	3.29
1/6/2013	14:02:00	14.774	14.499	0.275	0.634	4.32	-0.274	3.29
1/6/2013	14:17:00	14.773	14.495	0.278	0.641	4.32	-0.281	3.38
1/6/2013	14:32:00	14.763	14.495	0.268	0.618	4.32	-0.258	3.10
1/6/2013	14:47:00	14.770	14.492	0.278	0.641	4.32	-0.281	3.38
1/6/2013	15:02:00	14.768	14.490	0.278	0.641	4.32	-0.281	3.38
1/6/2013	15:17:00	14.768	14.498	0.270	0.623	4.32	-0.263	3.15
1/6/2013	15:32:00	14.768	14.488	0.280	0.646	4.32	-0.286	3.43
1/6/2013	15:47:00	14.770	14.489	0.281	0.648	4.32	-0.288	3.46
1/6/2013	16:02:00	14.765	14.489	0.276	0.637	4.32	-0.277	3.32
1/6/2013	16:17:00	14.766	14.482	0.284	0.655	4.32	-0.295	3.54
1/6/2013	16:32:00	14.765	14.491	0.274	0.632	4.32	-0.272	3.27
1/6/2013	16:47:00	14.766	14.488	0.278	0.641	4.32	-0.281	3.38
1/6/2013	17:02:00	14.764	14.482	0.282	0.651	4.32	-0.291	3.49
1/6/2013	17:17:00	14.764	14.483	0.281	0.648	4.32	-0.288	3.46
1/6/2013	17:32:00	14.761	14.487	0.274	0.632	4.32	-0.272	3.27
1/6/2013	17:47:00	14.767	14.488	0.279	0.644	4.32	-0.284	3.40
1/6/2013	18:02:00	14.772	14.501	0.271	0.625	4.32	-0.265	3.18
1/6/2013	18:17:00	14.777	14.498	0.279	0.644	4.32	-0.284	3.40
1/6/2013	18:32:00	14.778	14.507	0.271	0.625	4.32	-0.265	3.18
1/6/2013	18:47:00	14.775	14.493	0.282	0.651	4.32	-0.291	3.49
1/6/2013	19:02:00	14.773	14.495	0.278	0.641	4.32	-0.281	3.38
1/6/2013	19:17:00	14.773	14.504	0.269	0.621	4.32	-0.261	3.13
1/6/2013	19:32:00	14.779	14.503	0.276	0.637	4.32	-0.277	3.32
1/6/2013	19:47:00	14.778	14.507	0.271	0.625	4.32	-0.265	3.18
1/6/2013	20:02:00	14.784	14.510	0.274	0.632	4.32	-0.272	3.27
1/6/2013	20:17:00	14.781	14.515	0.266	0.614	4.32	-0.254	3.04
1/6/2013	20:32:00	14.790	14.510	0.280	0.646	4.32	-0.286	3.43
1/6/2013	20:47:00	14.789	14.520	0.269	0.621	4.32	-0.261	3.13
1/6/2013	21:02:00	14.786	14.521	0.265	0.611	4.32	-0.251	3.02
1/6/2013	21:17:00	14.784	14.526	0.258	0.595	4.32	-0.235	2.82
1/6/2013	21:32:00	14.793	14.523	0.270	0.623	4.32	-0.263	3.15
1/6/2013	21:47:00	14.792	14.518	0.274	0.632	4.32	-0.272	3.27
1/6/2013	22:02:00	14.798	14.546	0.252	0.581	4.32	-0.221	2.66
1/6/2013	22:17:00	14.816	14.547	0.269	0.621	4.32	-0.261	3.13
1/6/2013	22:32:00	14.808	14.554	0.254	0.586	4.32	-0.226	2.71
1/6/2013	22:47:00	14.815	14.539	0.276	0.637	4.32	-0.277	3.32
1/6/2013	23:02:00	14.815	14.556	0.259	0.598	4.32	-0.238	2.85
1/6/2013	23:17:00	14.815	14.545	0.270	0.623	4.32	-0.263	3.15
1/6/2013	23:32:00	14.824	14.558	0.266	0.614	4.32	-0.254	3.04
1/6/2013	23:47:00	14.821	14.556	0.265	0.611	4.32	-0.251	3.02
1/7/2013	0:02:00	14.826	14.552	0.274	0.632	4.32	-0.272	3.27
1/7/2013	0:17:00	14.825	14.566	0.259	0.598	4.32	-0.238	2.85
1/7/2013	0:32:00	14.832	14.557	0.275	0.634	4.32	-0.274	3.29
1/7/2013	0:47:00	14.826	14.557	0.269	0.621	4.32	-0.261	3.13
1/7/2013	1:02:00	14.825	14.557	0.268	0.618	4.32	-0.258	3.10
1/7/2013	1:17:00	14.828	14.562	0.266	0.614	4.32	-0.254	3.04
1/7/2013	1:32:00	14.828	14.562	0.266	0.614	4.32	-0.254	3.04
1/7/2013	1:47:00	14.825	14.562	0.263	0.607	4.32	-0.247	2.96
1/7/2013	2:02:00	14.829	14.562	0.267	0.616	4.32	-0.256	3.07
1/7/2013	2:17:00	14.835	14.566	0.269	0.621	4.32	-0.261	3.13
1/7/2013	2:32:00	14.838	14.565	0.273	0.630	4.32	-0.270	3.24
1/7/2013	2:47:00	14.832	14.565	0.267	0.616	4.32	-0.256	3.07
1/7/2013	3:02:00	14.836	14.578	0.258	0.595	4.32	-0.235	2.82
1/7/2013	3:17:00	14.837	14.572	0.265	0.611	4.32	-0.251	3.02
1/7/2013	3:32:00	14.840	14.569	0.271	0.625	4.32	-0.265	3.18
1/7/2013	3:47:00	14.840	14.579	0.261	0.602	4.32	-0.242	2.91
1/7/2013	4:02:00	14.838	14.592	0.246	0.568	4.32	-0.208	2.49
1/7/2013	4:17:00	14.843	14.590	0.253	0.584	4.32	-0.224	2.68
1/7/2013	4:32:00	14.849	14.580	0.269	0.621	4.32	-0.261	3.13
1/7/2013	4:47:00	14.844	14.587	0.257	0.593	4.32	-0.233	2.79
1/7/2013	5:02:00	14.846	14.599	0.247	0.570	4.32	-0.210	2.52
1/7/2013	5:17:00	14.845	14.577	0.268	0.618	4.32	-0.258	3.10
1/7/2013	5:32:00	14.852	14.601	0.251	0.579	4.32	-0.219	2.63
1/7/2013	5:47:00	14.844	14.577	0.267	0.616	4.32	-0.256	3.07
1/7/2013	6:02:00	14.860	14.610	0.250	0.577	4.32	-0.217	2.60
1/7/2013	6:17:00	14.861	14.608	0.253	0.584	4.32	-0.224	2.68
1/7/2013	6:32:00	14.864	14.597	0.267	0.616	4.32	-0.256	3.07

1/7/2013	6:47:00	14.871	14.620	0.251	0.579	4.32	-0.219	2.63
1/7/2013	7:02:00	14.878	14.620	0.258	0.595	4.32	-0.235	2.82
1/7/2013	7:17:00	14.878	14.631	0.247	0.570	4.32	-0.210	2.52
1/7/2013	7:32:00	14.883	14.616	0.267	0.616	4.32	-0.256	3.07
1/7/2013	7:47:00	14.886	14.638	0.248	0.572	4.32	-0.212	2.55
1/7/2013	8:02:00	14.887	14.622	0.265	0.611	4.32	-0.251	3.02
1/7/2013	8:17:00	14.894	14.627	0.267	0.616	4.32	-0.256	3.07
1/7/2013	8:32:00	14.900	14.633	0.267	0.616	4.32	-0.256	3.07
1/7/2013	8:47:00	14.898	14.641	0.257	0.593	4.32	-0.233	2.79
1/7/2013	9:02:00	14.908	14.642	0.266	0.614	4.32	-0.254	3.04
1/7/2013	9:17:00	14.904	14.641	0.263	0.607	4.32	-0.247	2.96
1/7/2013	9:32:00	14.913	14.646	0.267	0.616	4.32	-0.256	3.07
1/7/2013	9:47:00	14.914	14.648	0.266	0.614	4.32	-0.254	3.04
1/7/2013	10:02:00	14.917	14.657	0.260	0.600	4.32	-0.240	2.88
1/7/2013	10:17:00	14.921	14.657	0.264	0.609	4.32	-0.249	2.99
1/7/2013	10:32:00	14.929	14.659	0.270	0.623	4.32	-0.263	3.15
1/7/2013	10:47:00	14.928	14.660	0.268	0.618	4.32	-0.258	3.10
1/7/2013	11:02:00	14.933	14.659	0.274	0.632	4.32	-0.272	3.27
1/7/2013	11:17:00	14.929	14.656	0.273	0.630	4.32	-0.270	3.24
1/7/2013	11:32:00	14.932	14.650	0.282	0.651	4.32	-0.291	3.49
1/7/2013	11:47:00	14.922	14.654	0.268	0.618	4.32	-0.258	3.10
1/7/2013	12:02:00	14.916	14.644	0.272	0.628	4.32	-0.268	3.21
1/7/2013	12:17:00	14.913	14.643	0.270	0.623	4.32	-0.263	3.15
1/7/2013	12:32:00	14.912	14.642	0.270	0.623	4.32	-0.263	3.15
1/7/2013	12:47:00	14.911	14.635	0.276	0.637	4.32	-0.277	3.32
1/7/2013	13:02:00	14.905	14.636	0.269	0.621	4.32	-0.261	3.13
1/7/2013	13:17:00	14.901	14.633	0.268	0.618	4.32	-0.258	3.10
1/7/2013	13:32:00	14.901	14.638	0.263	0.607	4.32	-0.247	2.96
1/7/2013	13:47:00	14.902	14.631	0.271	0.625	4.32	-0.265	3.18
1/7/2013	14:02:00	14.900	14.628	0.272	0.628	4.32	-0.268	3.21
1/7/2013	14:17:00	14.901	14.637	0.264	0.609	4.32	-0.249	2.99
1/7/2013	14:32:00	14.899	14.632	0.267	0.616	4.32	-0.256	3.07
1/7/2013	14:47:00	14.899	14.632	0.267	0.616	4.32	-0.256	3.07
1/7/2013	15:02:00	14.898	14.633	0.265	0.611	4.32	-0.251	3.02
1/7/2013	15:17:00	14.899	14.631	0.268	0.618	4.32	-0.258	3.10
1/7/2013	15:32:00	14.900	14.635	0.265	0.611	4.32	-0.251	3.02
1/7/2013	15:47:00	14.903	14.633	0.270	0.623	4.32	-0.263	3.15
1/7/2013	16:02:00	14.905	14.636	0.269	0.621	4.32	-0.261	3.13
1/7/2013	16:17:00	14.904	14.634	0.270	0.623	4.32	-0.263	3.15
1/7/2013	16:32:00	14.905	14.633	0.272	0.628	4.32	-0.268	3.21
1/7/2013	16:47:00	14.904	14.637	0.267	0.616	4.32	-0.256	3.07
1/7/2013	17:02:00	14.912	14.642	0.270	0.623	4.32	-0.263	3.15
1/7/2013	17:17:00	14.904	14.641	0.263	0.607	4.32	-0.247	2.96
1/7/2013	17:32:00	14.914	14.645	0.269	0.621	4.32	-0.261	3.13
1/7/2013	17:47:00	14.911	14.628	0.283	0.653	4.32	-0.293	3.51
1/7/2013	18:02:00	14.912	14.652	0.260	0.600	4.32	-0.240	2.88
1/7/2013	18:17:00	14.916	14.647	0.269	0.621	4.32	-0.261	3.13
1/7/2013	18:32:00	14.911	14.650	0.261	0.602	4.32	-0.242	2.91
1/7/2013	18:47:00	14.916	14.652	0.264	0.609	4.32	-0.249	2.99
1/7/2013	19:02:00	14.917	14.650	0.267	0.616	4.32	-0.256	3.07
1/7/2013	19:17:00	14.912	14.654	0.258	0.595	4.32	-0.235	2.82
1/7/2013	19:32:00	14.910	14.649	0.261	0.602	4.32	-0.242	2.91
1/7/2013	19:47:00	14.917	14.651	0.266	0.614	4.32	-0.254	3.04
1/7/2013	20:02:00	14.922	14.658	0.264	0.609	4.32	-0.249	2.99
1/7/2013	20:17:00	14.926	14.656	0.270	0.623	4.32	-0.263	3.15
1/7/2013	20:32:00	14.919	14.651	0.268	0.618	4.32	-0.258	3.10
1/7/2013	20:47:00	14.924	14.658	0.266	0.614	4.32	-0.254	3.04
1/7/2013	21:02:00	14.916	14.667	0.249	0.574	4.32	-0.214	2.57
1/7/2013	21:17:00	14.918	14.669	0.249	0.574	4.32	-0.214	2.57
1/7/2013	21:32:00	14.922	14.640	0.282	0.651	4.32	-0.291	3.49
1/7/2013	21:47:00	14.920	14.649	0.271	0.625	4.32	-0.265	3.18
1/7/2013	22:02:00	14.915	14.662	0.253	0.584	4.32	-0.224	2.68
1/7/2013	22:17:00	14.917	14.671	0.246	0.568	4.32	-0.208	2.49
1/7/2013	22:32:00	14.925	14.661	0.264	0.609	4.32	-0.249	2.99
1/7/2013	22:47:00	14.921	14.663	0.258	0.595	4.32	-0.235	2.82
1/7/2013	23:02:00	14.924	14.657	0.267	0.616	4.32	-0.256	3.07
1/7/2013	23:17:00	14.923	14.662	0.261	0.602	4.32	-0.242	2.91
1/7/2013	23:32:00	14.919	14.665	0.254	0.586	4.32	-0.226	2.71
1/7/2013	23:47:00	14.919	14.653	0.266	0.614	4.32	-0.254	3.04
1/8/2013	0:02:00	14.922	14.651	0.271	0.625	4.32	-0.265	3.18
1/8/2013	0:17:00	14.916	14.650	0.266	0.614	4.32	-0.254	3.04
1/8/2013	0:32:00	14.914	14.657	0.257	0.593	4.32	-0.233	2.79
1/8/2013	0:47:00	14.916	14.642	0.274	0.632	4.32	-0.272	3.27
1/8/2013	1:02:00	14.915	14.663	0.252	0.581	4.32	-0.221	2.66
1/8/2013	1:17:00	14.913	14.659	0.254	0.586	4.32	-0.226	2.71
1/8/2013	1:32:00	14.911	14.655	0.256	0.591	4.32	-0.231	2.77
1/8/2013	1:47:00	14.911	14.654	0.257	0.593	4.32	-0.233	2.79
1/8/2013	2:02:00	14.914	14.642	0.272	0.628	4.32	-0.268	3.21
1/8/2013	2:17:00	14.909	14.637	0.272	0.628	4.32	-0.268	3.21
1/8/2013	2:32:00	14.908	14.652	0.256	0.591	4.32	-0.231	2.77
1/8/2013	2:47:00	14.909	14.651	0.258	0.595	4.32	-0.235	2.82
1/8/2013	3:02:00	14.904	14.639	0.265	0.611	4.32	-0.251	3.02
1/8/2013	3:17:00	14.898	14.635	0.263	0.607	4.32	-0.247	2.96
1/8/2013	3:32:00	14.901	14.647	0.254	0.586	4.32	-0.226	2.71
1/8/2013	3:47:00	14.904	14.637	0.267	0.616	4.32	-0.256	3.07
1/8/2013	4:02:00	14.907	14.634	0.273	0.630	4.32	-0.270	3.24
1/8/2013	4:17:00	14.907	14.646	0.261	0.602	4.32	-0.242	2.91
1/8/2013	4:32:00	14.903	14.639	0.264	0.609	4.32	-0.249	2.99
1/8/2013	4:47:00	14.899	14.643	0.256	0.591	4.32	-0.231	2.77
1/8/2013	5:02:00	14.903	14.643	0.260	0.600	4.32	-0.240	2.88
1/8/2013	5:17:00	14.893	14.644	0.249	0.574	4.32	-0.214	2.57
1/8/2013	5:32:00	14.897	14.636	0.261	0.602	4.32	-0.242	2.91
1/8/2013	5:47:00	14.907	14.648	0.259	0.598	4.32	-0.238	2.85
1/8/2013	6:02:00	14.904	14.651	0.253	0.584	4.32	-0.224	2.68
1/8/2013	6:17:00	14.908	14.639	0.269	0.621	4.32	-0.261	3.13
1/8/2013	6:32:00	14.913	14.656	0.257	0.593	4.32	-0.233	2.79
1/8/2013	6:47:00	14.913	14.653	0.260	0.600	4.32	-0.240	2.88
1/8/2013	7:02:00	14.914	14.651	0.263	0.607	4.32	-0.247	2.96
1/8/2013	7:17:00	14.921	14.662	0.259	0.598	4.32	-0.238	2.85
1/8/2013	7:32:00	14.927	14.670	0.257	0.593	4.32	-0.233	2.79
1/8/2013	7:47:00	14.924	14.663	0.261	0.602	4.32	-0.242	2.91
1/8/2013	8:02:00	14.928	14.662	0.266	0.614	4.32	-0.254	3.04
1/8/2013	8:17:00	14.925	14.658	0.267	0.616	4.32	-0.256	3.07
1/8/2013	8:32:00	14.925	14.668	0.257	0.593	4.32	-0.233	2.79
1/8/2013	8:47:00	14.926	14.666	0.260	0.600	4.32	-0.240	2.88
1/8/2013	9:02:00	14.929	14.662	0.267	0.616	4.32	-0.256	3.07
1/8/2013	9:17:00	14.921	14.662	0.259	0.598	4.32	-0.238	2.85
1/8/2013	9:32:00	14.927	14.664	0.263	0.607	4.32	-0.247	2.96
1/8/2013	9:47:00	14.923	14.666	0.257	0.593	4.32	-0.233	2.79
1/8/2013	10:02:00	14.942	14.670	0.272	0.628	4.32	-0.268	3.21
1/8/2013	10:17:00	14.926	14.670	0.256	0.591	4.32	-0.231	2.77
1/8/2013	10:32:00	14.931	14.669	0.262	0.604	4.32	-0.244	2.93
1/8/2013	10:47:00	14.936	14.669	0.267	0.616	4.32	-0.256	3.07
1/8/2013	11:02:00	14.930	14.663	0.267	0.616	4.32	-0.256	3.07
1/8/2013	11:17:00	14.934	14.669	0.265	0.611	4.32	-0.251	3.02
1/8/2013	11:32:00	14.927	14.659	0.268	0.618	4.32	-0.258	3.10
1/8/2013	11:47:00	14.919	14.656	0.263	0.607	4.32	-0.247	2.96
1/8/2013	12:02:00	14.921	14.655	0.266	0.614	4.32	-0.254	3.04
1/8/2013	12:17:00	14.917	14.651	0.266	0.614	4.32	-0.254	3.04
1/8/2013	12:32:00	14.919	14.649	0.270	0.623	4.32	-0.263	3.15
1/8/2013	12:47:00	14.915	14.646	0.269	0.621	4.32	-0.261	3.13
1/8/2013	13:02:00	14.903	14.641	0.262	0.604	4.32	-0.244	2.93
1/8/2013	13:17:00	14.899	14.638	0.261	0.602	4.32	-0.242	2.91
1/8/2013	13:32:00	14.901	14.636	0.265	0.611	4.32	-0.251	3.02
1/8/2013	13:47:00	14.901	14.634	0.267	0.616	4.32	-0.256	3.07
1/8/2013	14:02:00	14.898	14.630	0.268	0.618	4.32	-0.258	3.10
1/8/2013	14:17:00	14.894	14.629	0.265	0.611	4.32	-0.251	3.02
1/8/2013	14:32:00	14.894	14.630	0.264	0.609	4.32	-0.249	2.99
1/8/2013	14:47:00	14.895	14.625	0.270	0.623	4.32	-0.263	3.15
1/8/2013	15:02:00	14.891	14.627	0.264	0.609	4.32	-0.249	2.99
1/8/2013	15:17:00	14.890	14.619	0.271	0.625	4.32	-0.265	3.18
1/8/2013	15:32:00	14.890	14.626	0.264	0.609	4.32	-0.249	2.99
1/8/2013	15:47:00	14.891	14.627	0.264	0.609	4.32	-0.249	2.99

1/8/2013	16:02:00	14.897	14.629	0.268	0.618	4.32	-0.258	3.10
1/8/2013	16:17:00	14.893	14.634	0.259	0.598	4.32	-0.238	2.85
1/8/2013	16:32:00	14.899	14.634	0.265	0.611	4.32	-0.251	3.02
1/8/2013	16:47:00	14.897	14.631	0.266	0.614	4.32	-0.254	3.04
1/8/2013	17:02:00	14.896	14.636	0.260	0.600	4.32	-0.240	2.88
1/8/2013	17:17:00	14.896	14.625	0.271	0.625	4.32	-0.265	3.18
1/8/2013	17:32:00	14.894	14.630	0.264	0.609	4.32	-0.249	2.99
1/8/2013	17:47:00	14.893	14.627	0.266	0.614	4.32	-0.254	3.04
1/8/2013	18:02:00	14.893	14.622	0.271	0.625	4.32	-0.265	3.18
1/8/2013	18:17:00	14.897	14.632	0.265	0.611	4.32	-0.251	3.02
1/8/2013	18:32:00	14.898	14.635	0.263	0.607	4.32	-0.247	2.96
1/8/2013	18:47:00	14.904	14.636	0.268	0.618	4.32	-0.258	3.10
1/8/2013	19:02:00	14.900	14.640	0.260	0.600	4.32	-0.240	2.88
1/8/2013	19:17:00	14.902	14.643	0.259	0.598	4.32	-0.238	2.85
1/8/2013	19:32:00	14.906	14.643	0.263	0.607	4.32	-0.247	2.96
1/8/2013	19:47:00	14.904	14.652	0.252	0.581	4.32	-0.221	2.66
1/8/2013	20:02:00	14.910	14.640	0.270	0.623	4.32	-0.263	3.15
1/8/2013	20:17:00	14.910	14.635	0.275	0.634	4.32	-0.274	3.29
1/8/2013	20:32:00	14.911	14.644	0.267	0.616	4.32	-0.256	3.07
1/8/2013	20:47:00	14.908	14.643	0.265	0.611	4.32	-0.251	3.02
1/8/2013	21:02:00	14.910	14.648	0.262	0.604	4.32	-0.244	2.93
1/8/2013	21:17:00	14.909	14.644	0.265	0.611	4.32	-0.251	3.02
1/8/2013	21:32:00	14.907	14.648	0.259	0.598	4.32	-0.238	2.85
1/8/2013	21:47:00	14.908	14.644	0.264	0.609	4.32	-0.249	2.99
1/8/2013	22:02:00	14.906	14.643	0.263	0.607	4.32	-0.247	2.96
1/8/2013	22:17:00	14.909	14.643	0.266	0.614	4.32	-0.254	3.04
1/8/2013	22:32:00	14.910	14.646	0.264	0.609	4.32	-0.249	2.99
1/8/2013	22:47:00	14.907	14.641	0.266	0.614	4.32	-0.254	3.04
1/8/2013	23:02:00	14.904	14.646	0.258	0.595	4.32	-0.235	2.82
1/8/2013	23:17:00	14.907	14.647	0.260	0.600	4.32	-0.240	2.88
1/8/2013	23:32:00	14.909	14.644	0.265	0.611	4.32	-0.251	3.02
1/8/2013	23:47:00	14.911	14.644	0.267	0.616	4.32	-0.256	3.07
1/9/2013	0:02:00	14.907	14.637	0.270	0.623	4.32	-0.263	3.15
1/9/2013	0:17:00	14.907	14.636	0.271	0.625	4.32	-0.265	3.18
1/9/2013	0:32:00	14.897	14.637	0.260	0.600	4.32	-0.240	2.88
1/9/2013	0:47:00	14.896	14.632	0.264	0.609	4.32	-0.249	2.99
1/9/2013	1:02:00	14.895	14.631	0.264	0.609	4.32	-0.249	2.99
1/9/2013	1:17:00	14.894	14.624	0.270	0.623	4.32	-0.263	3.15
1/9/2013	1:32:00	14.893	14.629	0.264	0.609	4.32	-0.249	2.99
1/9/2013	1:47:00	14.894	14.634	0.260	0.600	4.32	-0.240	2.88
1/9/2013	2:02:00	14.898	14.639	0.259	0.598	4.32	-0.238	2.85
1/9/2013	2:17:00	14.900	14.642	0.258	0.595	4.32	-0.235	2.82
1/9/2013	2:32:00	14.897	14.643	0.254	0.586	4.32	-0.226	2.71
1/9/2013	2:47:00	14.905	14.643	0.262	0.604	4.32	-0.244	2.93
1/9/2013	3:02:00	14.909	14.648	0.261	0.602	4.32	-0.242	2.91
1/9/2013	3:17:00	14.907	14.645	0.262	0.604	4.32	-0.244	2.93
1/9/2013	3:32:00	14.901	14.653	0.248	0.572	4.32	-0.212	2.55
1/9/2013	3:47:00	14.893	14.647	0.246	0.568	4.32	-0.208	2.49
1/9/2013	4:02:00	14.908	14.636	0.272	0.628	4.32	-0.268	3.21
1/9/2013	4:17:00	14.890	14.646	0.244	0.563	4.32	-0.203	2.43
1/9/2013	4:32:00	14.897	14.644	0.253	0.584	4.32	-0.224	2.68
1/9/2013	4:47:00	14.902	14.645	0.257	0.593	4.32	-0.233	2.79
1/9/2013	5:02:00	14.905	14.642	0.263	0.607	4.32	-0.247	2.96
1/9/2013	5:17:00	14.900	14.642	0.258	0.595	4.32	-0.235	2.82
1/9/2013	5:32:00	14.902	14.644	0.258	0.595	4.32	-0.235	2.82
1/9/2013	5:47:00	14.904	14.643	0.261	0.602	4.32	-0.242	2.91
1/9/2013	6:02:00	14.898	14.645	0.253	0.584	4.32	-0.224	2.68
1/9/2013	6:17:00	14.903	14.649	0.254	0.586	4.32	-0.226	2.71
1/9/2013	6:32:00	14.899	14.640	0.259	0.598	4.32	-0.238	2.85
1/9/2013	6:47:00	14.907	14.656	0.251	0.579	4.32	-0.219	2.63
1/9/2013	7:02:00	14.904	14.643	0.261	0.602	4.32	-0.242	2.91
1/9/2013	7:17:00	14.910	14.649	0.261	0.602	4.32	-0.242	2.91
1/9/2013	7:32:00	14.910	14.651	0.259	0.598	4.32	-0.238	2.85
1/9/2013	7:47:00	14.916	14.660	0.256	0.591	4.32	-0.231	2.77
1/9/2013	8:02:00	14.915	14.646	0.269	0.621	4.32	-0.261	3.13
1/9/2013	8:17:00	14.914	14.652	0.262	0.604	4.32	-0.244	2.93
1/9/2013	8:32:00	14.911	14.662	0.249	0.574	4.32	-0.214	2.57
1/9/2013	8:47:00	14.929	14.667	0.262	0.604	4.32	-0.244	2.93
1/9/2013	9:02:00	14.928	14.672	0.256	0.591	4.32	-0.231	2.77
1/9/2013	9:17:00	14.927	14.673	0.254	0.586	4.32	-0.226	2.71
1/9/2013	9:32:00	14.936	14.673	0.263	0.607	4.32	-0.247	2.96
1/9/2013	9:47:00	14.930	14.677	0.253	0.584	4.32	-0.224	2.68
1/9/2013	10:02:00	14.928	14.669	0.259	0.598	4.32	-0.238	2.85
1/9/2013	10:17:00	14.934	14.677	0.257	0.593	4.32	-0.233	2.79
1/9/2013	10:32:00	14.925	14.681	0.244	0.563	4.32	-0.203	2.43
1/9/2013	10:47:00	14.933	14.676	0.257	0.593	4.32	-0.233	2.79
1/9/2013	11:02:00	14.938	14.678	0.260	0.600	4.32	-0.240	2.88
1/9/2013	11:17:00	14.938	14.673	0.265	0.611	4.32	-0.251	3.02
1/9/2013	11:32:00	14.932	14.668	0.264	0.609	4.32	-0.249	2.99
1/9/2013	11:47:00	14.929	14.664	0.265	0.611	4.32	-0.251	3.02
1/9/2013	12:02:00	14.919	14.658	0.261	0.602	4.32	-0.242	2.91
1/9/2013	12:17:00	14.909	14.651	0.258	0.595	4.32	-0.235	2.82
1/9/2013	12:32:00	14.905	14.643	0.262	0.604	4.32	-0.244	2.93
1/9/2013	12:47:00	14.895	14.635	0.260	0.600	4.32	-0.240	2.88
1/9/2013	13:02:00	14.896	14.635	0.261	0.602	4.32	-0.242	2.91
1/9/2013	13:17:00	14.900	14.634	0.266	0.614	4.32	-0.254	3.04
1/9/2013	13:32:00	14.890	14.633	0.257	0.593	4.32	-0.233	2.79
1/9/2013	13:47:00	14.896	14.639	0.257	0.593	4.32	-0.233	2.79
1/9/2013	14:02:00	14.892	14.637	0.255	0.588	4.32	-0.228	2.74
1/9/2013	14:17:00	14.894	14.632	0.262	0.604	4.32	-0.244	2.93
1/9/2013	14:32:00	14.895	14.633	0.262	0.604	4.32	-0.244	2.93
1/9/2013	14:47:00	14.894	14.637	0.257	0.593	4.32	-0.233	2.79
1/9/2013	15:02:00	14.898	14.631	0.267	0.616	4.32	-0.256	3.07
1/9/2013	15:17:00	14.890	14.630	0.260	0.600	4.32	-0.240	2.88
1/9/2013	15:32:00	14.891	14.635	0.256	0.591	4.32	-0.231	2.77
1/9/2013	15:47:00	14.897	14.633	0.264	0.609	4.32	-0.249	2.99
1/9/2013	16:02:00	14.895	14.633	0.262	0.604	4.32	-0.244	2.93
1/9/2013	16:17:00	14.894	14.634	0.260	0.600	4.32	-0.240	2.88
1/9/2013	16:32:00	14.896	14.638	0.258	0.595	4.32	-0.235	2.82
1/9/2013	16:47:00	14.897	14.636	0.261	0.602	4.32	-0.242	2.91
1/9/2013	17:02:00	14.900	14.637	0.263	0.607	4.32	-0.247	2.96
1/9/2013	17:17:00	14.895	14.639	0.256	0.591	4.32	-0.231	2.77
1/9/2013	17:32:00	14.904	14.635	0.269	0.621	4.32	-0.261	3.13
1/9/2013	17:47:00	14.904	14.640	0.264	0.609	4.32	-0.249	2.99
1/9/2013	18:02:00	14.903	14.640	0.263	0.607	4.32	-0.247	2.96
1/9/2013	18:17:00	14.910	14.639	0.271	0.625	4.32	-0.265	3.18
1/9/2013	18:32:00	14.905	14.645	0.260	0.600	4.32	-0.240	2.88
1/9/2013	18:47:00	14.908	14.644	0.264	0.609	4.32	-0.249	2.99
1/9/2013	19:02:00	14.914	14.646	0.268	0.618	4.32	-0.258	3.10
1/9/2013	19:17:00	14.907	14.643	0.264	0.609	4.32	-0.249	2.99
1/9/2013	19:32:00	14.908	14.641	0.267	0.616	4.32	-0.256	3.07
1/9/2013	19:47:00	14.905	14.643	0.262	0.604	4.32	-0.244	2.93
1/9/2013	20:02:00	14.908	14.637	0.271	0.625	4.32	-0.265	3.18
1/9/2013	20:17:00	14.910	14.641	0.269	0.621	4.32	-0.261	3.13
1/9/2013	20:32:00	14.903	14.636	0.267	0.616	4.32	-0.256	3.07
1/9/2013	20:47:00	14.905	14.638	0.267	0.616	4.32	-0.256	3.07
1/9/2013	21:02:00	14.902	14.637	0.265	0.611	4.32	-0.251	3.02
1/9/2013	21:17:00	14.901	14.644	0.257	0.593	4.32	-0.233	2.79
1/9/2013	21:32:00	14.910	14.643	0.267	0.616	4.32	-0.256	3.07
1/9/2013	21:47:00	14.907	14.647	0.260	0.600	4.32	-0.240	2.88
1/9/2013	22:02:00	14.912	14.656	0.256	0.591	4.32	-0.231	2.77
1/9/2013	22:17:00	14.916	14.659	0.257	0.593	4.32	-0.233	2.79
1/9/2013	22:32:00	14.919	14.661	0.258	0.595	4.32	-0.235	2.82
1/9/2013	22:47:00	14.925	14.657	0.268	0.618	4.32	-0.258	3.10
1/9/2013	23:02:00	14.926	14.665	0.261	0.602	4.32	-0.242	2.91
1/9/2013	23:17:00	14.930	14.667	0.263	0.607	4.32	-0.247	2.96
1/9/2013	23:32:00	14.929	14.668	0.261	0.602	4.32	-0.242	2.91
1/9/2013	23:47:00	14.929	14.669	0.260	0.600	4.32	-0.240	2.88
1/10/2013	0:02:00	14.926	14.668	0.258	0.595	4.32	-0.235	2.82
1/10/2013	0:17:00	14.929	14.664	0.265	0.611	4.32	-0.251	3.02
1/10/2013	0:32:00	14.931	14.666	0.265	0.611	4.32	-0.251	3.02
1/10/2013	0:47:00	14.928	14.664	0.264	0.609	4.32	-0.249	2.99
1/10/2013	1:02:00	14.928	14.664	0.264	0.609	4.32	-0.249	2.99

1/10/2013	1:17:00	14.923	14.656	0.267	0.616	4.32	-0.256	3.07
1/10/2013	1:32:00	14.919	14.657	0.262	0.604	4.32	-0.244	2.93
1/10/2013	1:47:00	14.922	14.661	0.261	0.602	4.32	-0.242	2.91
1/10/2013	2:02:00	14.921	14.658	0.263	0.607	4.32	-0.247	2.96
1/10/2013	2:17:00	14.923	14.658	0.265	0.611	4.32	-0.251	3.02
1/10/2013	2:32:00	14.922	14.660	0.262	0.604	4.32	-0.244	2.93
1/10/2013	2:47:00	14.922	14.661	0.261	0.602	4.32	-0.242	2.91
1/10/2013	3:02:00	14.923	14.664	0.259	0.598	4.32	-0.238	2.85
1/10/2013	3:17:00	14.925	14.668	0.257	0.593	4.32	-0.233	2.79
1/10/2013	3:32:00	14.929	14.667	0.262	0.604	4.32	-0.244	2.93
1/10/2013	3:47:00	14.926	14.661	0.265	0.611	4.32	-0.251	3.02
1/10/2013	4:02:00	14.924	14.661	0.263	0.607	4.32	-0.247	2.96
1/10/2013	4:17:00	14.922	14.659	0.263	0.607	4.32	-0.247	2.96
1/10/2013	4:32:00	14.918	14.665	0.253	0.584	4.32	-0.224	2.68
1/10/2013	4:47:00	14.914	14.646	0.268	0.618	4.32	-0.258	3.10
1/10/2013	5:02:00	14.919	14.651	0.268	0.618	4.32	-0.258	3.10
1/10/2013	5:17:00	14.921	14.663	0.258	0.595	4.32	-0.235	2.82
1/10/2013	5:32:00	14.926	14.667	0.259	0.598	4.32	-0.238	2.85
1/10/2013	5:47:00	14.917	14.664	0.253	0.584	4.32	-0.224	2.68
1/10/2013	6:02:00	14.931	14.665	0.266	0.614	4.32	-0.254	3.04
1/10/2013	6:17:00	14.927	14.669	0.258	0.595	4.32	-0.235	2.82
1/10/2013	6:32:00	14.937	14.671	0.266	0.614	4.32	-0.254	3.04
1/10/2013	6:47:00	14.932	14.677	0.255	0.588	4.32	-0.228	2.74
1/10/2013	7:02:00	14.932	14.683	0.249	0.574	4.32	-0.214	2.57
1/10/2013	7:17:00	14.944	14.686	0.258	0.595	4.32	-0.235	2.82
1/10/2013	7:32:00	14.937	14.689	0.248	0.572	4.32	-0.212	2.55
1/10/2013	7:47:00	14.943	14.690	0.253	0.584	4.32	-0.224	2.68
1/10/2013	8:02:00	14.953	14.694	0.259	0.598	4.32	-0.238	2.85
1/10/2013	8:17:00	14.949	14.704	0.245	0.565	4.32	-0.205	2.46
1/10/2013	8:32:00	14.952	14.692	0.260	0.600	4.32	-0.240	2.88
1/10/2013	8:47:00	14.946	14.691	0.255	0.588	4.32	-0.228	2.74
1/10/2013	9:02:00	14.955	14.696	0.259	0.598	4.32	-0.238	2.85
1/10/2013	9:17:00	14.952	14.699	0.253	0.584	4.32	-0.224	2.68
1/10/2013	9:32:00	14.950	14.695	0.255	0.588	4.32	-0.228	2.74
1/10/2013	9:47:00	14.952	14.700	0.252	0.581	4.32	-0.221	2.66
1/10/2013	10:02:00	14.952	14.700	0.252	0.581	4.32	-0.221	2.66
1/10/2013	10:17:00	14.951	14.694	0.257	0.593	4.32	-0.233	2.79
1/10/2013	10:32:00	14.951	14.694	0.257	0.593	4.32	-0.233	2.79
1/10/2013	10:47:00	14.947	14.696	0.251	0.579	4.32	-0.219	2.63
1/10/2013	11:02:00	14.943	14.686	0.257	0.593	4.32	-0.233	2.79
1/10/2013	11:17:00	14.940	14.689	0.251	0.579	4.32	-0.219	2.63
1/10/2013	11:32:00	14.943	14.683	0.260	0.600	4.32	-0.240	2.88
1/10/2013	11:47:00	14.939	14.680	0.259	0.598	4.32	-0.238	2.85
1/10/2013	12:02:00	14.927	14.676	0.251	0.579	4.32	-0.219	2.63
1/10/2013	12:17:00	14.930	14.674	0.256	0.591	4.32	-0.231	2.77
1/10/2013	12:32:00	14.925	14.670	0.255	0.588	4.32	-0.228	2.74
1/10/2013	12:47:00	14.924	14.666	0.258	0.595	4.32	-0.235	2.82
1/10/2013	13:02:00	14.916	14.666	0.250	0.577	4.32	-0.217	2.60
1/10/2013	13:17:00	14.916	14.658	0.258	0.595	4.32	-0.235	2.82
1/10/2013	13:32:00	14.910	14.662	0.248	0.572	4.32	-0.212	2.55
1/10/2013	13:47:00	14.915	14.663	0.252	0.581	4.32	-0.221	2.66
1/10/2013	14:02:00	14.915	14.654	0.261	0.602	4.32	-0.242	2.91
1/10/2013	14:17:00	14.912	14.653	0.259	0.598	4.32	-0.238	2.85
1/10/2013	14:32:00	14.909	14.657	0.252	0.581	4.32	-0.221	2.66
1/10/2013	14:47:00	14.909	14.658	0.251	0.579	4.32	-0.219	2.63
1/10/2013	15:02:00	14.905	14.653	0.252	0.581	4.32	-0.221	2.66
1/10/2013	15:17:00	14.913	14.654	0.259	0.598	4.32	-0.238	2.85
1/10/2013	15:32:00	14.906	14.651	0.255	0.588	4.32	-0.228	2.74
1/10/2013	15:47:00	14.909	14.656	0.253	0.584	4.32	-0.224	2.68
1/10/2013	16:02:00	14.911	14.657	0.254	0.586	4.32	-0.226	2.71
1/10/2013	16:17:00	14.908	14.654	0.254	0.586	4.32	-0.226	2.71
1/10/2013	16:32:00	14.913	14.657	0.256	0.591	4.32	-0.231	2.77
1/10/2013	16:47:00	14.910	14.657	0.253	0.584	4.32	-0.224	2.68
1/10/2013	17:02:00	14.910	14.655	0.255	0.588	4.32	-0.228	2.74
1/10/2013	17:17:00	14.914	14.654	0.260	0.600	4.32	-0.240	2.88
1/10/2013	17:32:00	14.914	14.654	0.260	0.600	4.32	-0.240	2.88
1/10/2013	17:47:00	14.918	14.656	0.262	0.604	4.32	-0.244	2.93
1/10/2013	18:02:00	14.912	14.659	0.253	0.584	4.32	-0.224	2.68
1/10/2013	18:17:00	14.917	14.656	0.261	0.602	4.32	-0.242	2.91
1/10/2013	18:32:00	14.922	14.662	0.260	0.600	4.32	-0.240	2.88
1/10/2013	18:47:00	14.920	14.659	0.261	0.602	4.32	-0.242	2.91
1/10/2013	19:02:00	14.919	14.658	0.261	0.602	4.32	-0.242	2.91
1/10/2013	19:17:00	14.914	14.661	0.253	0.584	4.32	-0.224	2.68
1/10/2013	19:32:00	14.918	14.654	0.264	0.609	4.32	-0.249	2.99
1/10/2013	19:47:00	14.912	14.659	0.253	0.584	4.32	-0.224	2.68
1/10/2013	20:02:00	14.912	14.655	0.257	0.593	4.32	-0.233	2.79
1/10/2013	20:17:00	14.913	14.653	0.260	0.600	4.32	-0.240	2.88
1/10/2013	20:32:00	14.912	14.653	0.259	0.598	4.32	-0.238	2.85
1/10/2013	20:47:00	14.910	14.649	0.261	0.602	4.32	-0.242	2.91
1/10/2013	21:02:00	14.911	14.655	0.256	0.591	4.32	-0.231	2.77
1/10/2013	21:17:00	14.912	14.649	0.263	0.607	4.32	-0.247	2.96
1/10/2013	21:32:00	14.908	14.651	0.257	0.593	4.32	-0.233	2.79
1/10/2013	21:47:00	14.907	14.648	0.259	0.598	4.32	-0.238	2.85
1/10/2013	22:02:00	14.911	14.650	0.261	0.602	4.32	-0.242	2.91
1/10/2013	22:17:00	14.906	14.640	0.266	0.614	4.32	-0.254	3.04
1/10/2013	22:32:00	14.906	14.646	0.260	0.600	4.32	-0.240	2.88
1/10/2013	22:47:00	14.901	14.644	0.257	0.593	4.32	-0.233	2.79
1/10/2013	23:02:00	14.897	14.648	0.249	0.574	4.32	-0.214	2.57
1/10/2013	23:17:00	14.902	14.646	0.256	0.591	4.32	-0.231	2.77
1/10/2013	23:32:00	14.895	14.643	0.252	0.581	4.32	-0.221	2.66
1/10/2013	23:47:00	14.895	14.633	0.262	0.604	4.32	-0.244	2.93
1/11/2013	0:02:00	14.892	14.638	0.254	0.586	4.32	-0.226	2.71
1/11/2013	0:17:00	14.894	14.634	0.260	0.600	4.32	-0.240	2.88
1/11/2013	0:32:00	14.888	14.629	0.259	0.598	4.32	-0.238	2.85
1/11/2013	0:47:00	14.887	14.633	0.254	0.586	4.32	-0.226	2.71
1/11/2013	1:02:00	14.880	14.627	0.253	0.584	4.32	-0.224	2.68
1/11/2013	1:17:00	14.883	14.622	0.261	0.602	4.32	-0.242	2.91
1/11/2013	1:32:00	14.881	14.626	0.255	0.588	4.32	-0.228	2.74
1/11/2013	1:47:00	14.884	14.625	0.259	0.598	4.32	-0.238	2.85
1/11/2013	2:02:00	14.881	14.626	0.255	0.588	4.32	-0.228	2.74
1/11/2013	2:17:00	14.883	14.627	0.256	0.591	4.32	-0.231	2.77
1/11/2013	2:32:00	14.883	14.626	0.257	0.593	4.32	-0.233	2.79
1/11/2013	2:47:00	14.877	14.623	0.254	0.586	4.32	-0.226	2.71
1/11/2013	3:02:00	14.884	14.621	0.263	0.607	4.32	-0.247	2.96
1/11/2013	3:17:00	14.877	14.616	0.261	0.602	4.32	-0.242	2.91
1/11/2013	3:32:00	14.873	14.614	0.259	0.598	4.32	-0.238	2.85
1/11/2013	3:47:00	14.873	14.607	0.266	0.614	4.32	-0.254	3.04
1/11/2013	4:02:00	14.862	14.607	0.255	0.588	4.32	-0.228	2.74
1/11/2013	4:17:00	14.869	14.609	0.260	0.600	4.32	-0.240	2.88
1/11/2013	4:32:00	14.868	14.603	0.265	0.611	4.32	-0.251	3.02
1/11/2013	4:47:00	14.866	14.602	0.264	0.609	4.32	-0.249	2.99
1/11/2013	5:02:00	14.861	14.604	0.257	0.593	4.32	-0.233	2.79
1/11/2013	5:17:00	14.861	14.602	0.259	0.598	4.32	-0.238	2.85
1/11/2013	5:32:00	14.854	14.592	0.262	0.604	4.32	-0.244	2.93
1/11/2013	5:47:00	14.854	14.600	0.254	0.586	4.32	-0.226	2.71
1/11/2013	6:02:00	14.850	14.600	0.250	0.577	4.32	-0.217	2.60
1/11/2013	6:17:00	14.856	14.597	0.259	0.598	4.32	-0.238	2.85
1/11/2013	6:32:00	14.861	14.608	0.253	0.584	4.32	-0.224	2.68
1/11/2013	6:47:00	14.863	14.609	0.254	0.586	4.32	-0.226	2.71
1/11/2013	7:02:00	14.871	14.609	0.262	0.604	4.32	-0.244	2.93
1/11/2013	7:17:00	14.864	14.609	0.255	0.588	4.32	-0.228	2.74
1/11/2013	7:32:00	14.861	14.609	0.252	0.581	4.32	-0.221	2.66
1/11/2013	7:47:00	14.859	14.598	0.261	0.602	4.32	-0.242	2.91
1/11/2013	8:02:00	14.858	14.604	0.254	0.586	4.32	-0.226	2.71
1/11/2013	8:17:00	14.859	14.599	0.260	0.600	4.32	-0.240	2.88
1/11/2013	8:32:00	14.859	14.606	0.253	0.584	4.32	-0.224	2.68
1/11/2013	8:47:00	14.861	14.603	0.258	0.595	4.32	-0.235	2.82
1/11/2013	9:02:00	14.870	14.617	0.253	0.584	4.32	-0.224	2.68
1/11/2013	9:17:00	14.873	14.615	0.258	0.595	4.32	-0.235	2.82
1/11/2013	9:32:00	14.871	14.610	0.261	0.602	4.32	-0.242	2.91
1/11/2013	9:47:00	14.868	14.608	0.260	0.600	4.32	-0.240	2.88
1/11/2013	10:02:00	14.864	14.607	0.257	0.593	4.32	-0.233	2.79
1/11/2013	10:17:00	14.859	14.606	0.253	0.584	4.32	-0.224	2.68

1/11/2013	10:32:00	14.859	14.600	0.259	0.598	4.32	-0.238	2.85
1/11/2013	10:47:00	14.857	14.597	0.260	0.600	4.32	-0.240	2.88
1/11/2013	11:02:00	14.854	14.597	0.257	0.593	4.32	-0.233	2.79
1/11/2013	11:17:00	14.852	14.593	0.259	0.598	4.32	-0.238	2.85
1/11/2013	11:32:00	14.847	14.589	0.258	0.595	4.32	-0.235	2.82
1/11/2013	11:47:00	14.841	14.582	0.259	0.598	4.32	-0.238	2.85
1/11/2013	12:02:00	14.840	14.580	0.260	0.600	4.32	-0.240	2.88
1/11/2013	12:17:00	14.837	14.578	0.259	0.598	4.32	-0.238	2.85
1/11/2013	12:32:00	14.830	14.577	0.253	0.584	4.32	-0.224	2.68
1/11/2013	12:47:00	14.825	14.571	0.254	0.586	4.32	-0.226	2.71
1/11/2013	13:02:00	14.822	14.568	0.254	0.586	4.32	-0.226	2.71
1/11/2013	13:17:00	14.815	14.560	0.255	0.588	4.32	-0.228	2.74
1/11/2013	13:32:00	14.810	14.561	0.249	0.574	4.32	-0.214	2.57
1/11/2013	13:47:00	14.810	14.562	0.248	0.572	4.32	-0.212	2.55
1/11/2013	14:02:00	14.811	14.553	0.258	0.595	4.32	-0.235	2.82
1/11/2013	14:17:00	14.808	14.546	0.262	0.604	4.32	-0.244	2.93
1/11/2013	14:32:00	14.811	14.549	0.262	0.604	4.32	-0.244	2.93
1/11/2013	14:47:00	14.807	14.547	0.260	0.600	4.32	-0.240	2.88
1/11/2013	15:02:00	14.808	14.548	0.260	0.600	4.32	-0.240	2.88
1/11/2013	15:17:00	14.806	14.549	0.257	0.593	4.32	-0.233	2.79
1/11/2013	15:32:00	14.806	14.547	0.259	0.598	4.32	-0.238	2.85
1/11/2013	15:47:00	14.806	14.546	0.260	0.600	4.32	-0.240	2.88
1/11/2013	16:02:00	14.805	14.546	0.259	0.598	4.32	-0.238	2.85
1/11/2013	16:17:00	14.808	14.555	0.253	0.584	4.32	-0.224	2.68
1/11/2013	16:32:00	14.810	14.542	0.268	0.618	4.32	-0.258	3.10
1/11/2013	16:47:00	14.807	14.543	0.264	0.609	4.32	-0.249	2.99
1/11/2013	17:02:00	14.806	14.545	0.261	0.602	4.32	-0.242	2.91
1/11/2013	17:17:00	14.800	14.538	0.262	0.604	4.32	-0.244	2.93
1/11/2013	17:32:00	14.797	14.537	0.260	0.600	4.32	-0.240	2.88
1/11/2013	17:47:00	14.799	14.546	0.253	0.584	4.32	-0.224	2.68
1/11/2013	18:02:00	14.802	14.541	0.261	0.602	4.32	-0.242	2.91
1/11/2013	18:17:00	14.802	14.545	0.257	0.593	4.32	-0.233	2.79
1/11/2013	18:32:00	14.803	14.544	0.259	0.598	4.32	-0.238	2.85
1/11/2013	18:47:00	14.800	14.541	0.259	0.598	4.32	-0.238	2.85
1/11/2013	19:02:00	14.799	14.536	0.263	0.607	4.32	-0.247	2.96
1/11/2013	19:17:00	14.801	14.543	0.258	0.595	4.32	-0.235	2.82
1/11/2013	19:32:00	14.796	14.546	0.250	0.577	4.32	-0.217	2.60
1/11/2013	19:47:00	14.800	14.540	0.260	0.600	4.32	-0.240	2.88
1/11/2013	20:02:00	14.805	14.547	0.258	0.595	4.32	-0.235	2.82
1/11/2013	20:17:00	14.799	14.539	0.260	0.600	4.32	-0.240	2.88
1/11/2013	20:32:00	14.797	14.541	0.256	0.591	4.32	-0.231	2.77
1/11/2013	20:47:00	14.803	14.540	0.263	0.607	4.32	-0.247	2.96
1/11/2013	21:02:00	14.800	14.540	0.260	0.600	4.32	-0.240	2.88
1/11/2013	21:17:00	14.793	14.543	0.250	0.577	4.32	-0.217	2.60
1/11/2013	21:32:00	14.798	14.541	0.257	0.593	4.32	-0.233	2.79
1/11/2013	21:47:00	14.801	14.547	0.254	0.586	4.32	-0.226	2.71
1/11/2013	22:02:00	14.800	14.543	0.257	0.593	4.32	-0.233	2.79
1/11/2013	22:17:00	14.800	14.550	0.250	0.577	4.32	-0.217	2.60
1/11/2013	22:32:00	14.798	14.542	0.256	0.591	4.32	-0.231	2.77
1/11/2013	22:47:00	14.800	14.541	0.259	0.598	4.32	-0.238	2.85
1/11/2013	23:02:00	14.796	14.537	0.259	0.598	4.32	-0.238	2.85
1/11/2013	23:17:00	14.794	14.538	0.256	0.591	4.32	-0.231	2.77
1/11/2013	23:32:00	14.784	14.533	0.251	0.579	4.32	-0.219	2.63
1/11/2013	23:47:00	14.787	14.534	0.253	0.584	4.32	-0.224	2.68
1/12/2013	0:02:00	14.788	14.533	0.255	0.588	4.32	-0.228	2.74
1/12/2013	0:17:00	14.782	14.531	0.251	0.579	4.32	-0.219	2.63
1/12/2013	0:32:00	14.789	14.532	0.257	0.593	4.32	-0.233	2.79
1/12/2013	0:47:00	14.783	14.529	0.254	0.586	4.32	-0.226	2.71
1/12/2013	1:02:00	14.782	14.533	0.249	0.574	4.32	-0.214	2.57
1/12/2013	1:17:00	14.785	14.530	0.255	0.588	4.32	-0.228	2.74
1/12/2013	1:32:00	14.787	14.528	0.259	0.598	4.32	-0.238	2.85
1/12/2013	1:47:00	14.781	14.530	0.251	0.579	4.32	-0.219	2.63
1/12/2013	2:02:00	14.785	14.532	0.253	0.584	4.32	-0.224	2.68
1/12/2013	2:17:00	14.787	14.541	0.246	0.568	4.32	-0.208	2.49
1/12/2013	2:32:00	14.787	14.534	0.253	0.584	4.32	-0.224	2.68
1/12/2013	2:47:00	14.795	14.549	0.246	0.568	4.32	-0.208	2.49
1/12/2013	3:02:00	14.794	14.535	0.259	0.598	4.32	-0.238	2.85
1/12/2013	3:17:00	14.790	14.530	0.260	0.600	4.32	-0.240	2.88
1/12/2013	3:32:00	14.781	14.527	0.254	0.586	4.32	-0.226	2.71
1/12/2013	3:47:00	14.778	14.526	0.252	0.581	4.32	-0.221	2.66
1/12/2013	4:02:00	14.774	14.522	0.252	0.581	4.32	-0.221	2.66
1/12/2013	4:17:00	14.780	14.520	0.260	0.600	4.32	-0.240	2.88
1/12/2013	4:32:00	14.781	14.519	0.262	0.604	4.32	-0.244	2.93
1/12/2013	4:47:00	14.776	14.523	0.253	0.584	4.32	-0.224	2.68
1/12/2013	5:02:00	14.771	14.522	0.249	0.574	4.32	-0.214	2.57
1/12/2013	5:17:00	14.771	14.512	0.259	0.598	4.32	-0.238	2.85
1/12/2013	5:32:00	14.777	14.519	0.258	0.595	4.32	-0.235	2.82
1/12/2013	5:47:00	14.769	14.516	0.253	0.584	4.32	-0.224	2.68
1/12/2013	6:02:00	14.770	14.520	0.250	0.577	4.32	-0.217	2.60
1/12/2013	6:17:00	14.779	14.524	0.255	0.588	4.32	-0.228	2.74
1/12/2013	6:32:00	14.774	14.522	0.252	0.581	4.32	-0.221	2.66
1/12/2013	6:47:00	14.774	14.524	0.250	0.577	4.32	-0.217	2.60
1/12/2013	7:02:00	14.783	14.525	0.258	0.595	4.32	-0.235	2.82
1/12/2013	7:17:00	14.780	14.529	0.251	0.579	4.32	-0.219	2.63
1/12/2013	7:32:00	14.787	14.525	0.262	0.604	4.32	-0.244	2.93
1/12/2013	7:47:00	14.784	14.528	0.256	0.591	4.32	-0.231	2.77
1/12/2013	8:02:00	14.784	14.536	0.248	0.572	4.32	-0.212	2.55
1/12/2013	8:17:00	14.785	14.536	0.249	0.574	4.32	-0.214	2.57
1/12/2013	8:32:00	14.792	14.539	0.253	0.584	4.32	-0.224	2.68
1/12/2013	8:47:00	14.789	14.538	0.251	0.579	4.32	-0.219	2.63
1/12/2013	9:02:00	14.791	14.541	0.250	0.577	4.32	-0.217	2.60
1/12/2013	9:17:00	14.797	14.544	0.253	0.584	4.32	-0.224	2.68
1/12/2013	9:32:00	14.795	14.540	0.255	0.588	4.32	-0.228	2.74
1/12/2013	9:47:00	14.799	14.544	0.255	0.588	4.32	-0.228	2.74
1/12/2013	10:02:00	14.799	14.540	0.259	0.598	4.32	-0.238	2.85
1/12/2013	10:17:00	14.800	14.542	0.258	0.595	4.32	-0.235	2.82
1/12/2013	10:32:00	14.798	14.540	0.258	0.595	4.32	-0.235	2.82
1/12/2013	10:47:00	14.795	14.539	0.256	0.591	4.32	-0.231	2.77
1/12/2013	11:02:00	14.789	14.540	0.249	0.574	4.32	-0.214	2.57
1/12/2013	11:17:00	14.790	14.538	0.252	0.581	4.32	-0.221	2.66
1/12/2013	11:32:00	14.788	14.532	0.256	0.591	4.32	-0.231	2.77
1/12/2013	11:47:00	14.779	14.530	0.249	0.574	4.32	-0.214	2.57
1/12/2013	12:02:00	14.786	14.527	0.259	0.598	4.32	-0.238	2.85
1/12/2013	12:17:00	14.781	14.525	0.256	0.591	4.32	-0.231	2.77
1/12/2013	12:32:00	14.777	14.520	0.257	0.593	4.32	-0.233	2.79
1/12/2013	12:47:00	14.778	14.517	0.261	0.602	4.32	-0.242	2.91
1/12/2013	13:02:00	14.774	14.516	0.258	0.595	4.32	-0.235	2.82
1/12/2013	13:17:00	14.774	14.517	0.257	0.593	4.32	-0.233	2.79
1/12/2013	13:32:00	14.767	14.519	0.248	0.572	4.32	-0.212	2.55
1/12/2013	13:47:00	14.772	14.513	0.259	0.598	4.32	-0.238	2.85
1/12/2013	14:02:00	14.768	14.508	0.260	0.600	4.32	-0.240	2.88
1/12/2013	14:17:00	14.772	14.513	0.259	0.598	4.32	-0.238	2.85
1/12/2013	14:32:00	14.765	14.514	0.251	0.579	4.32	-0.219	2.63
1/12/2013	14:47:00	14.768	14.510	0.258	0.595	4.32	-0.235	2.82
1/12/2013	15:02:00	14.770	14.513	0.257	0.593	4.32	-0.233	2.79
1/12/2013	15:17:00	14.767	14.515	0.252	0.581	4.32	-0.221	2.66
1/12/2013	15:32:00	14.764	14.517	0.247	0.570	4.32	-0.210	2.52
1/12/2013	15:47:00	14.769	14.510	0.259	0.598	4.32	-0.238	2.85
1/12/2013	16:02:00	14.769	14.515	0.254	0.586	4.32	-0.226	2.71
1/12/2013	16:17:00	14.767	14.509	0.258	0.595	4.32	-0.235	2.82
1/12/2013	16:32:00	14.769	14.513	0.256	0.591	4.32	-0.231	2.77
1/12/2013	16:47:00	14.765	14.509	0.256	0.591	4.32	-0.231	2.77
1/12/2013	17:02:00	14.770	14.511	0.259	0.598	4.32	-0.238	2.85
1/12/2013	17:17:00	14.762	14.512	0.250	0.577	4.32	-0.217	2.60
1/12/2013	17:32:00	14.767	14.512	0.255	0.588	4.32	-0.228	2.74
1/12/2013	17:47:00	14.768	14.509	0.259	0.598	4.32	-0.238	2.85
1/12/2013	18:02:00	14.763	14.510	0.253	0.584	4.32	-0.224	2.68
1/12/2013	18:17:00	14.765	14.510	0.255	0.588	4.32	-0.228	2.74
1/12/2013	18:32:00	14.769	14.507	0.262	0.604	4.32	-0.244	2.93
1/12/2013	18:47:00	14.766	14.509	0.257	0.593	4.32	-0.233	2.79
1/12/2013	19:02:00	14.762	14.510	0.252	0.581	4.32	-0.221	2.66
1/12/2013	19:17:00	14.763	14.505	0.258	0.595	4.32	-0.235	2.82
1/12/2013	19:32:00	14.762	14.504	0.258	0.595	4.32	-0.235	2.82

1/12/2013	19:47:00	14.764	14.503	0.261	0.602	4.32	-0.242	2.91
1/12/2013	20:02:00	14.761	14.503	0.258	0.595	4.32	-0.235	2.82
1/12/2013	20:17:00	14.758	14.501	0.257	0.593	4.32	-0.233	2.79
1/12/2013	20:32:00	14.755	14.507	0.248	0.572	4.32	-0.212	2.55
1/12/2013	20:47:00	14.760	14.506	0.254	0.586	4.32	-0.226	2.71
1/12/2013	21:02:00	14.757	14.503	0.254	0.586	4.32	-0.226	2.71
1/12/2013	21:17:00	14.757	14.506	0.251	0.579	4.32	-0.219	2.63
1/12/2013	21:32:00	14.759	14.505	0.254	0.586	4.32	-0.226	2.71
1/12/2013	21:47:00	14.759	14.509	0.250	0.577	4.32	-0.217	2.60
1/12/2013	22:02:00	14.768	14.511	0.257	0.593	4.32	-0.233	2.79
1/12/2013	22:17:00	14.766	14.512	0.254	0.586	4.32	-0.226	2.71
1/12/2013	22:32:00	14.762	14.504	0.258	0.595	4.32	-0.235	2.82
1/12/2013	22:47:00	14.759	14.506	0.253	0.584	4.32	-0.224	2.68
1/12/2013	23:02:00	14.767	14.511	0.256	0.591	4.32	-0.231	2.77
1/12/2013	23:17:00	14.766	14.508	0.258	0.595	4.32	-0.235	2.82
1/12/2013	23:32:00	14.766	14.511	0.255	0.588	4.32	-0.228	2.74
1/12/2013	23:47:00	14.761	14.504	0.257	0.593	4.32	-0.233	2.79
1/13/2013	0:02:00	14.756	14.501	0.255	0.588	4.32	-0.228	2.74
1/13/2013	0:17:00	14.751	14.503	0.248	0.572	4.32	-0.212	2.55
1/13/2013	0:32:00	14.757	14.505	0.252	0.581	4.32	-0.221	2.66
1/13/2013	0:47:00	14.755	14.503	0.252	0.581	4.32	-0.221	2.66
1/13/2013	1:02:00	14.756	14.508	0.248	0.572	4.32	-0.212	2.55
1/13/2013	1:17:00	14.759	14.506	0.253	0.584	4.32	-0.224	2.68
1/13/2013	1:32:00	14.761	14.505	0.256	0.591	4.32	-0.231	2.77
1/13/2013	1:47:00	14.762	14.503	0.259	0.598	4.32	-0.238	2.85
1/13/2013	2:02:00	14.758	14.506	0.252	0.581	4.32	-0.221	2.66
1/13/2013	2:17:00	14.756	14.510	0.246	0.568	4.32	-0.208	2.49
1/13/2013	2:32:00	14.758	14.504	0.254	0.586	4.32	-0.226	2.71
1/13/2013	2:47:00	14.754	14.508	0.246	0.568	4.32	-0.208	2.49
1/13/2013	3:02:00	14.760	14.509	0.251	0.579	4.32	-0.219	2.63
1/13/2013	3:17:00	14.756	14.505	0.251	0.579	4.32	-0.219	2.63
1/13/2013	3:32:00	14.755	14.505	0.250	0.577	4.32	-0.217	2.60
1/13/2013	3:47:00	14.754	14.493	0.261	0.602	4.32	-0.242	2.91
1/13/2013	4:02:00	14.760	14.501	0.259	0.598	4.32	-0.238	2.85
1/13/2013	4:17:00	14.755	14.500	0.255	0.588	4.32	-0.228	2.74
1/13/2013	4:32:00	14.757	14.502	0.255	0.588	4.32	-0.228	2.74
1/13/2013	4:47:00	14.752	14.495	0.257	0.593	4.32	-0.233	2.79
1/13/2013	5:02:00	14.757	14.496	0.261	0.602	4.32	-0.242	2.91
1/13/2013	5:17:00	14.752	14.498	0.254	0.586	4.32	-0.226	2.71
1/13/2013	5:32:00	14.756	14.502	0.254	0.586	4.32	-0.226	2.71
1/13/2013	5:47:00	14.757	14.505	0.252	0.581	4.32	-0.221	2.66
1/13/2013	6:02:00	14.753	14.504	0.249	0.574	4.32	-0.214	2.57
1/13/2013	6:17:00	14.756	14.507	0.249	0.574	4.32	-0.214	2.57
1/13/2013	6:32:00	14.754	14.509	0.245	0.565	4.32	-0.205	2.46
1/13/2013	6:47:00	14.762	14.507	0.255	0.588	4.32	-0.228	2.74
1/13/2013	7:02:00	14.767	14.509	0.258	0.595	4.32	-0.235	2.82
1/13/2013	7:17:00	14.766	14.510	0.256	0.591	4.32	-0.231	2.77
1/13/2013	7:32:00	14.769	14.514	0.255	0.588	4.32	-0.228	2.74
1/13/2013	7:47:00	14.770	14.522	0.248	0.572	4.32	-0.212	2.55
1/13/2013	8:02:00	14.772	14.520	0.252	0.581	4.32	-0.221	2.66
1/13/2013	8:17:00	14.771	14.521	0.250	0.577	4.32	-0.217	2.60
1/13/2013	8:32:00	14.777	14.525	0.252	0.581	4.32	-0.221	2.66
1/13/2013	8:47:00	14.777	14.529	0.248	0.572	4.32	-0.212	2.55
1/13/2013	9:02:00	14.776	14.525	0.251	0.579	4.32	-0.219	2.63
1/13/2013	9:17:00	14.785	14.526	0.259	0.598	4.32	-0.238	2.85
1/13/2013	9:32:00	14.780	14.532	0.248	0.572	4.32	-0.212	2.55
1/13/2013	9:47:00	14.783	14.534	0.249	0.574	4.32	-0.214	2.57
1/13/2013	10:02:00	14.780	14.532	0.248	0.572	4.32	-0.212	2.55
1/13/2013	10:17:00	14.780	14.531	0.249	0.574	4.32	-0.214	2.57
1/13/2013	10:32:00	14.782	14.525	0.257	0.593	4.32	-0.233	2.79
1/13/2013	10:47:00	14.778	14.522	0.256	0.591	4.32	-0.231	2.77
1/13/2013	11:02:00	14.774	14.522	0.252	0.581	4.32	-0.221	2.66
1/13/2013	11:17:00	14.774	14.517	0.257	0.593	4.32	-0.233	2.79
1/13/2013	11:32:00	14.772	14.513	0.259	0.598	4.32	-0.238	2.85
1/13/2013	11:47:00	14.768	14.510	0.258	0.595	4.32	-0.235	2.82
1/13/2013	12:02:00	14.761	14.507	0.254	0.586	4.32	-0.226	2.71
1/13/2013	12:17:00	14.760	14.502	0.258	0.595	4.32	-0.235	2.82
1/13/2013	12:32:00	14.762	14.500	0.262	0.604	4.32	-0.244	2.93
1/13/2013	12:47:00	14.756	14.497	0.259	0.598	4.32	-0.238	2.85
1/13/2013	13:02:00	14.752	14.498	0.254	0.586	4.32	-0.226	2.71
1/13/2013	13:17:00	14.748	14.489	0.259	0.598	4.32	-0.238	2.85
1/13/2013	13:32:00	14.746	14.485	0.261	0.602	4.32	-0.242	2.91
1/13/2013	13:47:00	14.743	14.483	0.260	0.600	4.32	-0.240	2.88
1/13/2013	14:02:00	14.747	14.489	0.258	0.595	4.32	-0.235	2.82
1/13/2013	14:17:00	14.747	14.488	0.259	0.598	4.32	-0.238	2.85
1/13/2013	14:32:00	14.741	14.490	0.251	0.579	4.32	-0.219	2.63
1/13/2013	14:47:00	14.745	14.483	0.262	0.604	4.32	-0.244	2.93
1/13/2013	15:02:00	14.746	14.492	0.254	0.586	4.32	-0.226	2.71
1/13/2013	15:17:00	14.751	14.491	0.260	0.600	4.32	-0.240	2.88
1/13/2013	15:32:00	14.751	14.490	0.261	0.602	4.32	-0.242	2.91
1/13/2013	15:47:00	14.749	14.494	0.255	0.588	4.32	-0.228	2.74
1/13/2013	16:02:00	14.751	14.496	0.255	0.588	4.32	-0.228	2.74
1/13/2013	16:17:00	14.752	14.496	0.256	0.591	4.32	-0.231	2.77
1/13/2013	16:32:00	14.753	14.497	0.256	0.591	4.32	-0.231	2.77
1/13/2013	16:47:00	14.748	14.493	0.255	0.588	4.32	-0.228	2.74
1/13/2013	17:02:00	14.750	14.493	0.257	0.593	4.32	-0.233	2.79
1/13/2013	17:17:00	14.750	14.498	0.252	0.581	4.32	-0.221	2.66
1/13/2013	17:32:00	14.747	14.494	0.253	0.584	4.32	-0.224	2.68
1/13/2013	17:47:00	14.753	14.495	0.258	0.595	4.32	-0.235	2.82
1/13/2013	18:02:00	14.754	14.490	0.264	0.609	4.32	-0.249	2.99
1/13/2013	18:17:00	14.754	14.490	0.264	0.609	4.32	-0.249	2.99
1/13/2013	18:32:00	14.752	14.493	0.259	0.598	4.32	-0.238	2.85
1/13/2013	18:47:00	14.750	14.494	0.256	0.591	4.32	-0.231	2.77
1/13/2013	19:02:00	14.751	14.493	0.258	0.595	4.32	-0.235	2.82
1/13/2013	19:17:00	14.755	14.494	0.261	0.602	4.32	-0.242	2.91
1/13/2013	19:32:00	14.756	14.495	0.261	0.602	4.32	-0.242	2.91
1/13/2013	19:47:00	14.754	14.496	0.258	0.595	4.32	-0.235	2.82
1/13/2013	20:02:00	14.754	14.493	0.261	0.602	4.32	-0.242	2.91
1/13/2013	20:17:00	14.752	14.495	0.257	0.593	4.32	-0.233	2.79
1/13/2013	20:32:00	14.751	14.497	0.254	0.586	4.32	-0.226	2.71
1/13/2013	20:47:00	14.753	14.497	0.256	0.591	4.32	-0.231	2.77
1/13/2013	21:02:00	14.759	14.497	0.262	0.604	4.32	-0.244	2.93
1/13/2013	21:17:00	14.758	14.493	0.265	0.611	4.32	-0.251	3.02
1/13/2013	21:32:00	14.757	14.498	0.259	0.598	4.32	-0.238	2.85
1/13/2013	21:47:00	14.757	14.502	0.255	0.588	4.32	-0.228	2.74
1/13/2013	22:02:00	14.756	14.503	0.253	0.584	4.32	-0.224	2.68
1/13/2013	22:17:00	14.756	14.501	0.255	0.588	4.32	-0.228	2.74
1/13/2013	22:32:00	14.758	14.502	0.256	0.591	4.32	-0.231	2.77
1/13/2013	22:47:00	14.761	14.501	0.260	0.600	4.32	-0.240	2.88
1/13/2013	23:02:00	14.759	14.499	0.260	0.600	4.32	-0.240	2.88
1/13/2013	23:17:00	14.756	14.497	0.259	0.598	4.32	-0.238	2.85
1/13/2013	23:32:00	14.757	14.500	0.257	0.593	4.32	-0.233	2.79
1/13/2013	23:47:00	14.755	14.501	0.254	0.586	4.32	-0.226	2.71
1/14/2013	0:02:00	14.758	14.507	0.251	0.579	4.32	-0.219	2.63
1/14/2013	0:17:00	14.762	14.502	0.260	0.600	4.32	-0.240	2.88
1/14/2013	0:32:00	14.758	14.501	0.257	0.593	4.32	-0.233	2.79
1/14/2013	0:47:00	14.763	14.500	0.263	0.607	4.32	-0.247	2.96
1/14/2013	1:02:00	14.762	14.503	0.259	0.598	4.32	-0.238	2.85
1/14/2013	1:17:00	14.763	14.508	0.255	0.588	4.32	-0.228	2.74
1/14/2013	1:32:00	14.762	14.505	0.257	0.593	4.32	-0.233	2.79
1/14/2013	1:47:00	14.764	14.504	0.260	0.600	4.32	-0.240	2.88
1/14/2013	2:02:00	14.764	14.508	0.256	0.591	4.32	-0.231	2.77
1/14/2013	2:17:00	14.769	14.510	0.259	0.598	4.32	-0.238	2.85
1/14/2013	2:32:00	14.764	14.510	0.254	0.586	4.32	-0.226	2.71
1/14/2013	2:47:00	14.766	14.513	0.253	0.584	4.32	-0.224	2.68
1/14/2013	3:02:00	14.762	14.505	0.257	0.593	4.32	-0.233	2.79
1/14/2013	3:17:00	14.765	14.512	0.253	0.584	4.32	-0.224	2.68
1/14/2013	3:32:00	14.761	14.507	0.254	0.586	4.32	-0.226	2.71
1/14/2013	3:47:00	14.761	14.506	0.255	0.588	4.32	-0.228	2.74
1/14/2013	4:02:00	14.762	14.507	0.255	0.588	4.32	-0.228	2.74
1/14/2013	4:17:00	14.759	14.506	0.253	0.584	4.32	-0.224	2.68
1/14/2013	4:32:00	14.760	14.496	0.264	0.609	4.32	-0.249	2.99
1/14/2013	4:47:00	14.752	14.505	0.247	0.570	4.32	-0.210	2.52

1/14/2013	5:02:00	14.757	14.500	0.257	0.593	4.32	-0.233	2.79
1/14/2013	5:17:00	14.755	14.502	0.253	0.584	4.32	-0.224	2.68
1/14/2013	5:32:00	14.751	14.498	0.253	0.584	4.32	-0.224	2.68
1/14/2013	5:47:00	14.754	14.502	0.252	0.581	4.32	-0.221	2.66
1/14/2013	6:02:00	14.757	14.501	0.256	0.591	4.32	-0.231	2.77
1/14/2013	6:17:00	14.759	14.505	0.254	0.586	4.32	-0.226	2.71
1/14/2013	6:32:00	14.765	14.507	0.258	0.595	4.32	-0.235	2.82
1/14/2013	6:47:00	14.759	14.506	0.253	0.584	4.32	-0.224	2.68
1/14/2013	7:02:00	14.755	14.508	0.247	0.570	4.32	-0.210	2.52
1/14/2013	7:17:00	14.756	14.514	0.242	0.558	4.32	-0.198	2.38
1/14/2013	7:32:00	14.762	14.513	0.249	0.574	4.32	-0.214	2.57
1/14/2013	7:47:00	14.764	14.518	0.246	0.568	4.32	-0.208	2.49
1/14/2013	8:02:00	14.769	14.519	0.250	0.577	4.32	-0.217	2.60
1/14/2013	8:17:00	14.771	14.517	0.254	0.586	4.32	-0.226	2.71
1/14/2013	8:32:00	14.770	14.520	0.250	0.577	4.32	-0.217	2.60
1/14/2013	8:47:00	14.777	14.527	0.250	0.577	4.32	-0.217	2.60
1/14/2013	9:02:00	14.777	14.529	0.248	0.572	4.32	-0.212	2.55
1/14/2013	9:17:00	14.777	14.526	0.251	0.579	4.32	-0.219	2.63
1/14/2013	9:32:00	14.781	14.528	0.253	0.584	4.32	-0.224	2.68
1/14/2013	9:47:00	14.781	14.529	0.252	0.581	4.32	-0.221	2.66
1/14/2013	10:02:00	14.781	14.523	0.258	0.595	4.32	-0.235	2.82
1/14/2013	10:17:00	14.755	14.522	0.233	0.538	4.32	-0.178	2.13
1/14/2013	10:32:00	14.764	14.528	0.236	0.544	4.32	-0.184	2.21
1/14/2013	10:47:00	14.763	14.526	0.237	0.547	4.32	-0.187	2.24
1/14/2013	11:02:00	14.755	14.523	0.232	0.535	4.32	-0.175	2.10
1/14/2013	11:17:00	14.753	14.519	0.234	0.540	4.32	-0.180	2.16
1/14/2013	11:32:00	14.744	14.510	0.234	0.540	4.32	-0.180	2.16
1/14/2013	11:47:00	14.748	14.512	0.236	0.544	4.32	-0.184	2.21
1/14/2013	12:02:00	14.742	14.511	0.231	0.533	4.32	-0.173	2.08
1/14/2013	12:17:00	14.741	14.500	0.241	0.556	4.32	-0.196	2.35
1/14/2013	12:32:00	14.742	14.503	0.239	0.551	4.32	-0.191	2.30
1/14/2013	12:47:00	14.732	14.500	0.232	0.535	4.32	-0.175	2.10
1/14/2013	13:02:00	14.735	14.500	0.235	0.542	4.32	-0.182	2.19
1/14/2013	13:17:00	14.734	14.497	0.237	0.547	4.32	-0.187	2.24
1/14/2013	13:32:00	14.736	14.496	0.240	0.554	4.32	-0.194	2.32
1/14/2013	13:47:00	14.728	14.490	0.238	0.549	4.32	-0.189	2.27
1/14/2013	14:02:00	14.722	14.495	0.227	0.524	4.32	-0.164	1.96
1/14/2013	14:17:00	14.722	14.487	0.235	0.542	4.32	-0.182	2.19
1/14/2013	14:32:00	14.722	14.489	0.233	0.538	4.32	-0.178	2.13
1/14/2013	14:47:00	14.726	14.488	0.238	0.549	4.32	-0.189	2.27
1/14/2013	15:02:00	14.728	14.495	0.233	0.538	4.32	-0.178	2.13
1/14/2013	15:17:00	14.724	14.498	0.226	0.521	4.32	-0.161	1.94
1/14/2013	15:32:00	14.729	14.496	0.233	0.538	4.32	-0.178	2.13
1/14/2013	15:47:00	14.730	14.500	0.230	0.531	4.32	-0.171	2.05
1/14/2013	16:02:00	14.730	14.498	0.232	0.535	4.32	-0.175	2.10
1/14/2013	16:17:00	14.730	14.502	0.228	0.526	4.32	-0.166	1.99
1/14/2013	16:32:00	14.741	14.502	0.239	0.551	4.32	-0.191	2.30
1/14/2013	16:47:00	14.738	14.505	0.233	0.538	4.32	-0.178	2.13
1/14/2013	17:02:00	14.741	14.505	0.236	0.544	4.32	-0.184	2.21
1/14/2013	17:17:00	14.740	14.508	0.232	0.535	4.32	-0.175	2.10
1/14/2013	17:32:00	14.740	14.510	0.230	0.531	4.32	-0.171	2.05
1/14/2013	17:47:00	14.748	14.510	0.238	0.549	4.32	-0.189	2.27
1/14/2013	18:02:00	14.742	14.503	0.239	0.551	4.32	-0.191	2.30
1/14/2013	18:17:00	14.743	14.516	0.227	0.524	4.32	-0.164	1.96
1/14/2013	18:32:00	14.746	14.510	0.236	0.544	4.32	-0.184	2.21
1/14/2013	18:47:00	14.748	14.513	0.235	0.542	4.32	-0.182	2.19
1/14/2013	19:02:00	14.747	14.515	0.232	0.535	4.32	-0.175	2.10
1/14/2013	19:17:00	14.750	14.508	0.242	0.558	4.32	-0.198	2.38
1/14/2013	19:32:00	14.748	14.512	0.236	0.544	4.32	-0.184	2.21
1/14/2013	19:47:00	14.742	14.512	0.230	0.531	4.32	-0.171	2.05
1/14/2013	20:02:00	14.749	14.517	0.232	0.535	4.32	-0.175	2.10
1/14/2013	20:17:00	14.745	14.509	0.236	0.544	4.32	-0.184	2.21
1/14/2013	20:32:00	14.752	14.509	0.243	0.561	4.32	-0.201	2.41
1/14/2013	20:47:00	14.744	14.511	0.233	0.538	4.32	-0.178	2.13
1/14/2013	21:02:00	14.743	14.509	0.234	0.540	4.32	-0.180	2.16
1/14/2013	21:17:00	14.744	14.507	0.237	0.547	4.32	-0.187	2.24
1/14/2013	21:32:00	14.738	14.505	0.233	0.538	4.32	-0.178	2.13
1/14/2013	21:47:00	14.741	14.505	0.236	0.544	4.32	-0.184	2.21
1/14/2013	22:02:00	14.742	14.506	0.236	0.544	4.32	-0.184	2.21
1/14/2013	22:17:00	14.744	14.503	0.241	0.556	4.32	-0.196	2.35
1/14/2013	22:32:00	14.745	14.507	0.238	0.549	4.32	-0.189	2.27
1/14/2013	22:47:00	14.743	14.509	0.234	0.540	4.32	-0.180	2.16
1/14/2013	23:02:00	14.741	14.507	0.234	0.540	4.32	-0.180	2.16
1/14/2013	23:17:00	14.739	14.505	0.234	0.540	4.32	-0.180	2.16
1/14/2013	23:32:00	14.745	14.513	0.232	0.535	4.32	-0.175	2.10
1/14/2013	23:47:00	14.743	14.507	0.236	0.544	4.32	-0.184	2.21
1/15/2013	0:02:00	14.746	14.515	0.231	0.533	4.32	-0.173	2.08
1/15/2013	0:17:00	14.744	14.510	0.234	0.540	4.32	-0.180	2.16
1/15/2013	0:32:00	14.746	14.509	0.237	0.547	4.32	-0.187	2.24
1/15/2013	0:47:00	14.741	14.507	0.234	0.540	4.32	-0.180	2.16
1/15/2013	1:02:00	14.740	14.510	0.230	0.531	4.32	-0.171	2.05
1/15/2013	1:17:00	14.741	14.510	0.231	0.533	4.32	-0.173	2.08
1/15/2013	1:32:00	14.748	14.508	0.240	0.554	4.32	-0.194	2.32
1/15/2013	1:47:00	14.741	14.507	0.234	0.540	4.32	-0.180	2.16
1/15/2013	2:02:00	14.743	14.509	0.234	0.540	4.32	-0.180	2.16
1/15/2013	2:17:00	14.747	14.511	0.236	0.544	4.32	-0.184	2.21
1/15/2013	2:32:00	14.748	14.509	0.239	0.551	4.32	-0.191	2.30
1/15/2013	2:47:00	14.739	14.505	0.234	0.540	4.32	-0.180	2.16
1/15/2013	3:02:00	14.746	14.514	0.232	0.535	4.32	-0.175	2.10
1/15/2013	3:17:00	14.743	14.509	0.234	0.540	4.32	-0.180	2.16
1/15/2013	3:32:00	14.747	14.507	0.240	0.554	4.32	-0.194	2.32
1/15/2013	3:47:00	14.742	14.504	0.238	0.549	4.32	-0.189	2.27
1/15/2013	4:02:00	14.742	14.503	0.239	0.551	4.32	-0.191	2.30
1/15/2013	4:17:00	14.737	14.502	0.235	0.542	4.32	-0.182	2.19
1/15/2013	4:32:00	14.732	14.498	0.234	0.540	4.32	-0.180	2.16
1/15/2013	4:47:00	14.736	14.503	0.233	0.538	4.32	-0.178	2.13
1/15/2013	5:02:00	14.730	14.501	0.229	0.528	4.32	-0.168	2.02
1/15/2013	5:17:00	14.733	14.498	0.235	0.542	4.32	-0.182	2.19
1/15/2013	5:32:00	14.732	14.493	0.239	0.551	4.32	-0.191	2.30
1/15/2013	5:47:00	14.732	14.496	0.236	0.544	4.32	-0.184	2.21
1/15/2013	6:02:00	14.731	14.494	0.237	0.547	4.32	-0.187	2.24
1/15/2013	6:17:00	14.729	14.498	0.231	0.533	4.32	-0.173	2.08
1/15/2013	6:32:00	14.730	14.494	0.236	0.544	4.32	-0.184	2.21
1/15/2013	6:47:00	14.735	14.504	0.231	0.533	4.32	-0.173	2.08
1/15/2013	7:02:00	14.737	14.505	0.232	0.535	4.32	-0.175	2.10
1/15/2013	7:17:00	14.741	14.506	0.235	0.542	4.32	-0.182	2.19
1/15/2013	7:32:00	14.745	14.515	0.230	0.531	4.32	-0.171	2.05
1/15/2013	7:47:00	14.753	14.521	0.232	0.535	4.32	-0.175	2.10
1/15/2013	8:02:00	14.753	14.528	0.225	0.519	4.32	-0.159	1.91
1/15/2013	8:17:00	14.761	14.526	0.235	0.542	4.32	-0.182	2.19
1/15/2013	8:32:00	14.764	14.531	0.233	0.538	4.32	-0.178	2.13
1/15/2013	8:47:00	14.767	14.535	0.232	0.535	4.32	-0.175	2.10
1/15/2013	9:02:00	14.773	14.536	0.237	0.547	4.32	-0.187	2.24
1/15/2013	9:17:00	14.770	14.536	0.234	0.540	4.32	-0.180	2.16
1/15/2013	9:32:00	14.774	14.541	0.233	0.538	4.32	-0.178	2.13
1/15/2013	9:47:00	14.768	14.537	0.231	0.533	4.32	-0.173	2.08
1/15/2013	10:02:00	14.771	14.545	0.226	0.521	4.32	-0.161	1.94
1/15/2013	10:17:00	14.775	14.541	0.234	0.540	4.32	-0.180	2.16
1/15/2013	10:32:00	14.767	14.538	0.229	0.528	4.32	-0.168	2.02
1/15/2013	10:47:00	14.773	14.544	0.229	0.528	4.32	-0.168	2.02
1/15/2013	11:02:00	14.767	14.539	0.228	0.526	4.32	-0.166	1.99
1/15/2013	11:17:00	14.771	14.533	0.238	0.549	4.32	-0.189	2.27
1/15/2013	11:32:00	14.767	14.530	0.237	0.547	4.32	-0.187	2.24
1/15/2013	11:47:00	14.764	14.529	0.235	0.542	4.32	-0.182	2.19
1/15/2013	12:02:00	14.757	14.527	0.230	0.531	4.32	-0.171	2.05
1/15/2013	12:17:00	14.754	14.523	0.231	0.533	4.32	-0.173	2.08
1/15/2013	12:32:00	14.750	14.510	0.240	0.554	4.32	-0.194	2.32
1/15/2013	12:47:00	14.749	14.513	0.236	0.544	4.32	-0.184	2.21
1/15/2013	13:02:00	14.748	14.511	0.237	0.547	4.32	-0.187	2.24
1/15/2013	13:17:00	14.745	14.509	0.236	0.544	4.32	-0.184	2.21
1/15/2013	13:32:00	14.742	14.501	0.241	0.556	4.32	-0.196	2.35
1/15/2013	13:47:00	14.743	14.501	0.242	0.558	4.32	-0.198	2.38
1/15/2013	14:02:00	14.735	14.504	0.231	0.533	4.32	-0.173	2.08

1/15/2013	14:17:00	14.738	14.501	0.237	0.547	4.32	-0.187	2.24	
1/15/2013	14:32:00	14.732	14.497	0.235	0.542	4.32	-0.182	2.19	
1/15/2013	14:47:00	14.736	14.501	0.235	0.542	4.32	-0.182	2.19	
1/15/2013	15:02:00	14.735	14.499	0.236	0.544	4.32	-0.184	2.21	
1/15/2013	15:17:00	14.733	14.500	0.233	0.538	4.32	-0.178	2.13	
1/15/2013	15:32:00	14.730	14.497	0.233	0.538	4.32	-0.178	2.13	
1/15/2013	15:47:00	14.734	14.501	0.233	0.538	4.32	-0.178	2.13	
1/15/2013	16:02:00	14.738	14.502	0.236	0.544	4.32	-0.184	2.21	
1/15/2013	16:17:00	14.740	14.503	0.237	0.547	4.32	-0.187	2.24	
1/15/2013	16:32:00	14.738	14.504	0.234	0.540	4.32	-0.180	2.16	
1/15/2013	16:47:00	14.737	14.505	0.232	0.535	4.32	-0.175	2.10	
1/15/2013	17:02:00	14.736	14.497	0.239	0.551	4.32	-0.191	2.30	
1/15/2013	17:17:00	14.739	14.500	0.239	0.551	4.32	-0.191	2.30	
1/15/2013	17:32:00	14.738	14.504	0.234	0.540	4.32	-0.180	2.16	
1/15/2013	17:47:00	14.737	14.498	0.239	0.551	4.32	-0.191	2.30	
1/15/2013	18:02:00	14.742	14.501	0.241	0.556	4.32	-0.196	2.35	
1/15/2013	18:17:00	14.738	14.493	0.245	0.565	4.32	-0.205	2.46	
1/15/2013	18:32:00	14.739	14.513	0.226	0.521	4.32	-0.161	1.94	
1/15/2013	18:47:00	14.743	14.505	0.238	0.549	4.32	-0.189	2.27	
1/15/2013	19:02:00	14.743	14.505	0.238	0.549	4.32	-0.189	2.27	
1/15/2013	19:17:00	14.737	14.500	0.237	0.547	4.32	-0.187	2.24	
1/15/2013	19:32:00	14.737	14.504	0.233	0.538	4.32	-0.178	2.13	
1/15/2013	19:47:00	14.737	14.500	0.237	0.547	4.32	-0.187	2.24	
1/15/2013	20:02:00	14.731	14.500	0.231	0.533	4.32	-0.173	2.08	
1/15/2013	20:17:00	14.735	14.500	0.235	0.542	4.32	-0.182	2.19	
1/15/2013	20:32:00	14.732	14.498	0.234	0.540	4.32	-0.180	2.16	
1/15/2013	20:47:00	14.736	14.497	0.239	0.551	4.32	-0.191	2.30	
1/15/2013	21:02:00	14.726	14.493	0.233	0.538	4.32	-0.178	2.13	
1/15/2013	21:17:00	14.729	14.490	0.239	0.551	4.32	-0.191	2.30	
1/15/2013	21:32:00	14.724	14.490	0.234	0.540	4.32	-0.180	2.16	
1/15/2013	21:47:00	14.720	14.485	0.235	0.542	4.32	-0.182	2.19	
1/15/2013	22:02:00	14.717	14.480	0.237	0.547	4.32	-0.187	2.24	
1/15/2013	22:17:00	14.716	14.482	0.234	0.540	4.32	-0.180	2.16	
1/15/2013	22:32:00	14.706	14.482	0.224	0.517	4.32	-0.157	1.88	
1/15/2013	22:47:00	14.717	14.487	0.230	0.531	4.32	-0.171	2.05	
1/15/2013	23:02:00	14.715	14.485	0.230	0.531	4.32	-0.171	2.05	
1/15/2013	23:17:00	14.711	14.481	0.230	0.531	4.32	-0.171	2.05	
1/15/2013	23:32:00	14.714	14.479	0.235	0.542	4.32	-0.182	2.19	
1/15/2013	23:47:00	14.703	14.473	0.230	0.531	4.32	-0.171	2.05	
1/16/2013	0:02:00	14.710	14.475	0.235	0.542	4.32	-0.182	2.19	1E-08
1/16/2013	0:17:00	14.706	14.475	0.231	0.533	4.32	-0.173	2.08	1.6
1/16/2013	0:32:00	14.706	14.477	0.229	0.528	4.32	-0.168	2.02	1.6
1/16/2013	0:47:00	14.709	14.479	0.230	0.531	4.32	-0.171	2.05	1.6
1/16/2013	1:02:00	14.707	14.474	0.233	0.538	4.32	-0.178	2.13	1.6
1/16/2013	1:17:00	14.700	14.470	0.230	0.531	4.32	-0.171	2.05	1.6
1/16/2013	1:32:00	14.698	14.466	0.232	0.535	4.32	-0.175	2.10	1.6
1/16/2013	1:47:00	14.701	14.471	0.230	0.531	4.32	-0.171	2.05	1.6
1/16/2013	2:02:00	14.709	14.474	0.235	0.542	4.32	-0.182	2.19	1.6
1/16/2013	2:17:00	14.706	14.470	0.236	0.544	4.32	-0.184	2.21	1.6
1/16/2013	2:32:00	14.703	14.471	0.232	0.535	4.32	-0.175	2.10	1.6
1/16/2013	2:47:00	14.711	14.478	0.233	0.538	4.32	-0.178	2.13	1.6
1/16/2013	3:02:00	14.702	14.468	0.234	0.540	4.32	-0.180	2.16	1.6
1/16/2013	3:17:00	14.695	14.463	0.232	0.535	4.32	-0.175	2.10	1.6
1/16/2013	3:32:00	14.690	14.464	0.226	0.521	4.32	-0.161	1.94	1.6
1/16/2013	3:47:00	14.689	14.454	0.235	0.542	4.32	-0.182	2.19	1.6
1/16/2013	4:02:00	14.693	14.459	0.234	0.540	4.32	-0.180	2.16	1.6
1/16/2013	4:17:00	14.684	14.457	0.227	0.524	4.32	-0.164	1.96	1.6
1/16/2013	4:32:00	14.689	14.455	0.234	0.540	4.32	-0.180	2.16	1.6
1/16/2013	4:47:00	14.689	14.459	0.230	0.531	4.32	-0.171	2.05	1.6
1/16/2013	5:02:00	14.685	14.458	0.227	0.524	4.32	-0.164	1.96	1.6
1/16/2013	5:17:00	14.691	14.450	0.241	0.556	4.32	-0.196	2.35	1.6
1/16/2013	5:32:00	14.680	14.453	0.227	0.524	4.32	-0.164	1.96	1.6
1/16/2013	5:47:00	14.689	14.453	0.236	0.544	4.32	-0.184	2.21	1.6
1/16/2013	6:02:00	14.684	14.459	0.225	0.519	4.32	-0.159	1.91	1.6
1/16/2013	6:17:00	14.681	14.457	0.224	0.517	4.32	-0.157	1.88	1.6
1/16/2013	6:32:00	14.694	14.455	0.239	0.551	4.32	-0.191	2.30	1.6
1/16/2013	6:47:00	14.702	14.458	0.244	0.563	4.32	-0.203	2.43	1.6
1/16/2013	7:02:00	14.686	14.459	0.227	0.524	4.32	-0.164	1.96	1.6
1/16/2013	7:17:00	14.700	14.456	0.244	0.563	4.32	-0.203	2.43	1.6
1/16/2013	7:32:00	14.687	14.461	0.226	0.521	4.32	-0.161	1.94	1.6
1/16/2013	7:47:00	14.702	14.460	0.242	0.558	4.32	-0.198	2.38	1.6
1/16/2013	8:02:00	14.702	14.469	0.233	0.538	4.32	-0.178	2.13	1.6
1/16/2013	8:17:00	14.704	14.464	0.240	0.554	4.32	-0.194	2.32	1.6
1/16/2013	8:32:00	14.695	14.464	0.231	0.533	4.32	-0.173	2.08	1.6
1/16/2013	8:47:00	14.708	14.469	0.239	0.551	4.32	-0.191	2.30	1.6
1/16/2013	9:02:00	14.700	14.466	0.234	0.540	4.32	-0.180	2.16	1.6
1/16/2013	9:17:00	14.709	14.470	0.239	0.551	4.32	-0.191	2.30	1.6
1/16/2013	9:32:00	14.702	14.474	0.228	0.526	4.32	-0.166	1.99	1.6
1/16/2013	9:47:00	14.695	14.470	0.225	0.519	4.32	-0.159	1.91	1.6
1/16/2013	10:02:00	14.711	14.475	0.236	0.544	4.32	-0.184	2.21	1.6
1/16/2013	10:17:00	14.709	14.469	0.240	0.554	4.32	-0.194	2.32	1.6
1/16/2013	10:32:00	14.701	14.469	0.232	0.535	4.32	-0.175	2.10	1.6
1/16/2013	10:47:00	14.705	14.458	0.247	0.570	4.32	-0.210	2.52	1.6
1/16/2013	11:02:00	14.686	14.467	0.219	0.505	4.32	-0.145	1.74	1.6
1/16/2013	11:17:00	14.689	14.454	0.235	0.542	4.32	-0.182	2.19	1.6
1/16/2013	11:32:00	14.694	14.455	0.239	0.551	4.32	-0.191	2.30	1.6
1/16/2013	11:47:00	14.691	14.453	0.238	0.549	4.32	-0.189	2.27	1.6
1/16/2013	12:02:00	14.678	14.449	0.229	0.528	4.32	-0.168	2.02	1.6
1/16/2013	12:17:00	14.676	14.448	0.228	0.526	4.32	-0.166	1.99	1.6
1/16/2013	12:32:00	14.680	14.449	0.231	0.533	4.32	-0.173	2.08	1.6
1/16/2013	12:47:00	14.683	14.454	0.229	0.528	4.32	-0.168	2.02	1.6
1/16/2013	13:02:00	14.681	14.454	0.227	0.524	4.32	-0.164	1.96	1.6
1/16/2013	13:17:00	14.688	14.454	0.234	0.540	4.32	-0.180	2.16	1.6
1/16/2013	13:32:00	14.692	14.459	0.233	0.538	4.32	-0.178	2.13	1.6
1/16/2013	13:47:00	14.695	14.463	0.232	0.535	4.32	-0.175	2.10	1.6
1/16/2013	14:02:00	14.697	14.447	0.250	0.577	4.32	-0.217	2.60	1.6
1/16/2013	14:17:00	14.694	14.453	0.241	0.556	4.32	-0.196	2.35	1.6
1/16/2013	14:32:00	14.696	14.459	0.237	0.547	4.32	-0.187	2.24	1.6
1/16/2013	14:47:00	14.697	14.443	0.254	0.586	4.32	-0.226	2.71	1.6
1/16/2013	15:02:00	14.703	14.455	0.248	0.572	4.32	-0.212	2.55	1.6
1/16/2013	15:17:00	14.703	14.456	0.247	0.570	4.32	-0.210	2.52	1.6
1/16/2013	15:32:00	14.714	14.448	0.266	0.614	4.32	-0.254	3.04	1.6
1/16/2013	15:47:00	14.706	14.450	0.256	0.591	4.32	-0.231	2.77	1.6
1/16/2013	16:02:00	14.719	14.462	0.257	0.593	4.32	-0.233	2.79	1.6
1/16/2013	16:17:00	14.720	14.440	0.280	0.646	4.32	-0.286	3.43	1.6
1/16/2013	16:32:00	14.716	14.439	0.277	0.639	4.32	-0.279	3.35	1.6
1/16/2013	16:47:00	14.719	14.437	0.282	0.651	4.32	-0.291	3.49	1.6
1/16/2013	17:02:00	14.710	14.447	0.263	0.607	4.32	-0.247	2.96	1.6
1/16/2013	17:17:00	14.709	14.452	0.257	0.593	4.32	-0.233	2.79	1.6
1/16/2013	17:32:00	14.718	14.451	0.267	0.616	4.32	-0.256	3.07	1.6
1/16/2013	17:47:00	14.712	14.470	0.242	0.558	4.32	-0.198	2.38	1.6
1/16/2013	18:02:00	14.711	14.464	0.247	0.570	4.32	-0.210	2.52	1.6
1/16/2013	18:17:00	14.706	14.453	0.253	0.584	4.32	-0.224	2.68	1.6
1/16/2013	18:32:00	14.705	14.460	0.245	0.565	4.32	-0.205	2.46	1.6
1/16/2013	18:47:00	14.704	14.456	0.248	0.572	4.32	-0.212	2.55	1.6
1/16/2013	19:02:00	14.698	14.439	0.259	0.598	4.32	-0.238	2.85	1.6
1/16/2013	19:17:00	14.704	14.447	0.257	0.593	4.32	-0.233	2.79	1.6
1/16/2013	19:32:00	14.700	14.444	0.256	0.591	4.32	-0.231	2.77	1.6
1/16/2013	19:47:00	14.694	14.451	0.243	0.561	4.32	-0.201	2.41	1.6
1/16/2013	20:02:00	14.698	14.454	0.244	0.563	4.32	-0.203	2.43	1.6
1/16/2013	20:17:00	14.702	14.450	0.252	0.581	4.32	-0.221	2.66	1.6
1/16/2013	20:32:00	14.701	14.448	0.253	0.584	4.32	-0.224	2.68	1.6
1/16/2013	20:47:00	14.695	14.454	0.241	0.556	4.32	-0.196	2.35	1.6
1/16/2013	21:02:00	14.697	14.451	0.246	0.568	4.32	-0.208	2.49	1.6
1/16/2013	21:17:00	14.703	14.454	0.249	0.574	4.32	-0.214	2.57	1.6
1/16/2013	21:32:00	14.703	14.447	0.256	0.591	4.32	-0.231	2.77	1.6
1/16/2013	21:47:00	14.703	14.442	0.261	0.602	4.32	-0.242	2.91	1.6
1/16/2013	22:02:00	14.717	14.448	0.269	0.621	4.32	-0.261	3.13	1.6
1/16/2013	22:17:00	14.744	14.450	0.294	0.678	4.32	-0.318	3.82	1.6
1/16/2013	22:32:00	14.767	14.444	0.323	0.745	4.32	-0.385	4.62	1.6
1/16/2013	22:47:00	14.786	14.446	0.340	0.784	4.32	-0.424	5.09	1.6
1/16/2013	23:02:00	14.809	14.448	0.361	0.833	4.32	-0.473	5.67	1.6
1/16/2013	23:17:00	14.821	14.450	0.371	0.856	4.32	-0.496	5.95	1.6

1/16/2013	23:32:00	14.827	14.444	0.383	0.884	4.32	-0.524	6.28	1.6
1/16/2013	23:47:00	14.835	14.441	0.394	0.909	4.32	-0.549	6.59	1.6
1/17/2013	0:02:00	14.866	14.442	0.424	0.978	4.32	-0.618	7.42	1.6
1/17/2013	0:17:00	14.887	14.442	0.445	1.027	4.32	-0.667	8.00	1.6
1/17/2013	0:32:00	14.915	14.442	0.473	1.091	4.32	-0.731	8.77	1.6
1/17/2013	0:47:00	14.940	14.440	0.500	1.154	4.32	-0.794	9.52	1.6
1/17/2013	1:02:00	14.980	14.440	0.540	1.246	4.32	-0.886	10.63	1.6
1/17/2013	1:17:00	15.013	14.437	0.576	1.329	4.32	-0.969	11.63	1.6
1/17/2013	1:32:00	15.028	14.439	0.589	1.359	4.32	-0.999	11.99	1.6
1/17/2013	1:47:00	15.026	14.438	0.588	1.357	4.32	-0.997	11.96	1.6
1/17/2013	2:02:00	15.015	14.437	0.578	1.333	4.32	-0.973	11.68	1.6
1/17/2013	2:17:00	14.997	14.436	0.561	1.294	4.32	-0.934	11.21	1.6
1/17/2013	2:32:00	14.985	14.435	0.550	1.269	4.32	-0.909	10.91	1.6
1/17/2013	2:47:00	14.966	14.438	0.528	1.218	4.32	-0.858	10.30	1.6
1/17/2013	3:02:00	14.959	14.434	0.525	1.211	4.32	-0.851	10.21	1.6
1/17/2013	3:17:00	14.948	14.434	0.514	1.186	4.32	-0.826	9.91	1.6
1/17/2013	3:32:00	14.943	14.428	0.515	1.188	4.32	-0.828	9.94	1.6
1/17/2013	3:47:00	14.938	14.424	0.514	1.186	4.32	-0.826	9.91	1.6
1/17/2013	4:02:00	14.923	14.426	0.497	1.147	4.32	-0.787	9.44	1.6
1/17/2013	4:17:00	14.929	14.423	0.506	1.167	4.32	-0.807	9.69	1.6
1/17/2013	4:32:00	14.922	14.424	0.498	1.149	4.32	-0.789	9.47	1.6
1/17/2013	4:47:00	14.912	14.425	0.487	1.124	4.32	-0.764	9.16	1.6
1/17/2013	5:02:00	14.904	14.423	0.481	1.110	4.32	-0.750	9.00	1.6
1/17/2013	5:17:00	14.896	14.423	0.473	1.091	4.32	-0.731	8.77	1.6
1/17/2013	5:32:00	14.886	14.424	0.462	1.066	4.32	-0.706	8.47	1.6
1/17/2013	5:47:00	14.887	14.424	0.463	1.068	4.32	-0.708	8.50	1.6
1/17/2013	6:02:00	14.884	14.428	0.456	1.052	4.32	-0.692	8.30	1.6
1/17/2013	6:17:00	14.880	14.426	0.454	1.047	4.32	-0.687	8.25	1.6
1/17/2013	6:32:00	14.874	14.428	0.446	1.029	4.32	-0.669	8.03	1.6
1/17/2013	6:47:00	14.877	14.432	0.445	1.027	4.32	-0.667	8.00	1.6
1/17/2013	7:02:00	14.875	14.437	0.438	1.010	4.32	-0.650	7.81	1.6
1/17/2013	7:17:00	14.880	14.430	0.450	1.038	4.32	-0.678	8.14	1.6
1/17/2013	7:32:00	14.877	14.433	0.444	1.024	4.32	-0.664	7.97	1.6
1/17/2013	7:47:00	14.870	14.431	0.439	1.013	4.32	-0.653	7.83	1.6
1/17/2013	8:02:00	14.870	14.431	0.439	1.013	4.32	-0.653	7.83	1.6
1/17/2013	8:17:00	14.869	14.435	0.434	1.001	4.32	-0.641	7.69	1.6
1/17/2013	8:32:00	14.865	14.435	0.430	0.992	4.32	-0.632	7.58	1.6
1/17/2013	8:47:00	14.863	14.436	0.427	0.985	4.32	-0.625	7.50	1.6
1/17/2013	9:02:00	14.869	14.439	0.430	0.992	4.32	-0.632	7.58	1.6
1/17/2013	9:17:00	14.862	14.437	0.425	0.980	4.32	-0.620	7.45	1.6
1/17/2013	9:32:00	14.863	14.438	0.425	0.980	4.32	-0.620	7.45	1.6
1/17/2013	9:47:00	14.867	14.437	0.430	0.992	4.32	-0.632	7.58	1.6
1/17/2013	10:02:00	14.878	14.441	0.437	1.008	4.32	-0.648	7.78	1.6
1/17/2013	10:17:00	14.900	14.439	0.461	1.064	4.32	-0.704	8.44	1.6
1/17/2013	10:32:00	14.917	14.433	0.484	1.117	4.32	-0.757	9.08	1.6
1/17/2013	10:47:00	14.950	14.428	0.522	1.204	4.32	-0.844	10.13	1.6
1/17/2013	11:02:00	14.991	14.427	0.564	1.301	4.32	-0.941	11.29	1.6
1/17/2013	11:17:00	15.027	14.424	0.603	1.391	4.32	-1.031	12.37	1.6
1/17/2013	11:32:00	15.036	14.426	0.610	1.407	4.32	-1.047	12.57	1.6
1/17/2013	11:47:00	15.033	14.426	0.607	1.400	4.32	-1.040	12.48	1.6
1/17/2013	12:02:00	15.016	14.414	0.602	1.389	4.32	-1.029	12.35	1.6
1/17/2013	12:17:00	15.006	14.404	0.602	1.389	4.32	-1.029	12.35	1.6
1/17/2013	12:32:00	14.979	14.384	0.595	1.373	4.32	-1.013	12.15	1.6
1/17/2013	12:47:00	14.964	14.386	0.578	1.333	4.32	-0.973	11.68	1.6
1/17/2013	13:02:00	14.938	14.390	0.548	1.264	4.32	-0.904	10.85	1.6
1/17/2013	13:17:00	14.922	14.377	0.545	1.257	4.32	-0.897	10.77	1.6
1/17/2013	13:32:00	14.915	14.384	0.531	1.225	4.32	-0.865	10.38	1.6
1/17/2013	13:47:00	14.895	14.362	0.533	1.230	4.32	-0.870	10.44	1.6
1/17/2013	14:02:00	14.877	14.363	0.514	1.186	4.32	-0.826	9.91	1.6
1/17/2013	14:17:00	14.880	14.346	0.534	1.232	4.32	-0.872	10.46	1.6
1/17/2013	14:32:00	14.864	14.366	0.498	1.149	4.32	-0.789	9.47	1.6
1/17/2013	14:47:00	14.861	14.366	0.495	1.142	4.32	-0.782	9.38	1.6
1/17/2013	15:02:00	14.858	14.364	0.494	1.140	4.32	-0.780	9.36	1.6
1/17/2013	15:17:00	14.850	14.329	0.521	1.202	4.32	-0.842	10.10	1.6
1/17/2013	15:32:00	14.849	14.331	0.518	1.195	4.32	-0.835	10.02	1.6
1/17/2013	15:47:00	14.835	14.326	0.509	1.174	4.32	-0.814	9.77	1.6
1/17/2013	16:02:00	14.834	14.333	0.501	1.156	4.32	-0.796	9.55	1.6
1/17/2013	16:17:00	14.831	14.326	0.505	1.165	4.32	-0.805	9.66	1.6
1/17/2013	16:32:00	14.822	14.335	0.487	1.124	4.32	-0.764	9.16	1.6
1/17/2013	16:47:00	14.831	14.330	0.501	1.156	4.32	-0.796	9.55	1.6
1/17/2013	17:02:00	14.844	14.372	0.472	1.089	4.32	-0.729	8.75	1.6
1/17/2013	17:17:00	14.941	14.378	0.563	1.299	4.32	-0.939	11.27	1.6
1/17/2013	17:32:00	15.076	14.381	0.695	1.603	4.32	-1.243	14.92	1.6
1/17/2013	17:47:00	15.353	14.400	0.953	2.199	4.32	-1.839	22.06	1.6
1/17/2013	18:02:00	15.400	14.369	1.031	2.379	4.32	-2.019	24.22	1.6
1/17/2013	18:17:00	15.355	14.364	0.991	2.286	4.32	-1.926	23.11	1.6
1/17/2013	18:32:00	15.320	14.363	0.957	2.208	4.32	-1.848	22.17	1.6
1/17/2013	18:47:00	15.295	14.360	0.935	2.157	4.32	-1.797	21.56	1.6
1/17/2013	19:02:00	15.288	14.375	0.913	2.106	4.32	-1.746	20.96	1.6
1/17/2013	19:17:00	15.287	14.391	0.896	2.067	4.32	-1.707	20.48	1.6
1/17/2013	19:32:00	15.294	14.396	0.898	2.072	4.32	-1.712	20.54	1.6
1/17/2013	19:47:00	15.267	14.406	0.861	1.986	4.32	-1.626	19.52	1.6
1/17/2013	20:02:00	15.259	14.416	0.843	1.945	4.32	-1.585	19.02	1.6
1/17/2013	20:17:00	15.255	14.431	0.824	1.901	4.32	-1.541	18.49	1.6
1/17/2013	20:32:00	15.244	14.440	0.804	1.855	4.32	-1.495	17.94	1.6
1/17/2013	20:47:00	15.246	14.457	0.789	1.820	4.32	-1.460	17.52	1.6
1/17/2013	21:02:00	15.253	14.471	0.782	1.804	4.32	-1.444	17.33	1.6
1/17/2013	21:17:00	15.265	14.472	0.793	1.829	4.32	-1.469	17.63	1.6
1/17/2013	21:32:00	15.277	14.485	0.792	1.827	4.32	-1.467	17.61	1.6
1/17/2013	21:47:00	15.295	14.495	0.800	1.846	4.32	-1.486	17.83	1.6
1/17/2013	22:02:00	15.326	14.502	0.824	1.901	4.32	-1.541	18.49	1.6
1/17/2013	22:17:00	15.351	14.515	0.836	1.929	4.32	-1.569	18.82	1.6
1/17/2013	22:32:00	15.378	14.530	0.848	1.956	4.32	-1.596	19.16	1.6
1/17/2013	22:47:00	15.399	14.537	0.862	1.989	4.32	-1.629	19.54	1.6
1/17/2013	23:02:00	15.405	14.532	0.873	2.014	4.32	-1.654	19.85	1.6
1/17/2013	23:17:00	15.405	14.529	0.876	2.021	4.32	-1.661	19.93	1.6
1/17/2013	23:32:00	15.405	14.522	0.883	2.037	4.32	-1.677	20.12	1.6
1/17/2013	23:47:00	15.398	14.527	0.871	2.009	4.32	-1.649	19.79	1.6
1/18/2013	0:02:00	15.395	14.529	0.866	1.998	4.32	-1.638	19.65	1.6
1/18/2013	0:17:00	15.388	14.547	0.841	1.940	4.32	-1.580	18.96	1.6
1/18/2013	0:32:00	15.380	14.553	0.827	1.908	4.32	-1.548	18.57	1.6
1/18/2013	0:47:00	15.358	14.551	0.807	1.862	4.32	-1.502	18.02	1.6
1/18/2013	1:02:00	15.361	14.567	0.794	1.832	4.32	-1.472	17.66	1.6
1/18/2013	1:17:00	15.352	14.570	0.782	1.804	4.32	-1.444	17.33	1.6
1/18/2013	1:32:00	15.343	14.554	0.789	1.820	4.32	-1.460	17.52	1.6
1/18/2013	1:47:00	15.332	14.570	0.762	1.758	4.32	-1.398	16.78	1.6
1/18/2013	2:02:00	15.324	14.561	0.763	1.760	4.32	-1.400	16.80	1.6
1/18/2013	2:17:00	15.321	14.570	0.751	1.733	4.32	-1.373	16.47	1.6
1/18/2013	2:32:00	15.321	14.581	0.740	1.707	4.32	-1.347	16.17	1.6
1/18/2013	2:47:00	15.307	14.588	0.719	1.659	4.32	-1.299	15.58	1.6
1/18/2013	3:02:00	15.308	14.578	0.730	1.684	4.32	-1.324	15.89	1.6
1/18/2013	3:17:00	15.319	14.587	0.732	1.689	4.32	-1.329	15.94	1.6
1/18/2013	3:32:00	15.311	14.581	0.730	1.684	4.32	-1.324	15.89	1.6
1/18/2013	3:47:00	15.307	14.581	0.726	1.675	4.32	-1.315	15.78	1.6
1/18/2013	4:02:00	15.290	14.600	0.690	1.592	4.32	-1.232	14.78	1.6
1/18/2013	4:17:00	15.284	14.608	0.676	1.560	4.32	-1.200	14.39	1.6
1/18/2013	4:32:00	15.279	14.599	0.680	1.569	4.32	-1.209	14.51	1.6
1/18/2013	4:47:00	15.272	14.609	0.663	1.530	4.32	-1.170	14.03	1.6
1/18/2013	5:02:00	15.266	14.601	0.665	1.534	4.32	-1.174	14.09	1.6
1/18/2013	5:17:00	15.268	14.594	0.674	1.555	4.32	-1.195	14.34	1.6
1/18/2013	5:32:00	15.266	14.600	0.666	1.536	4.32	-1.176	14.12	1.6
1/18/2013	5:47:00	15.252	14.599	0.653	1.506	4.32	-1.146	13.76	1.6
1/18/2013	6:02:00	15.252	14.609	0.643	1.483	4.32	-1.123	13.48	1.6
1/18/2013	6:17:00	15.255	14.620	0.635	1.465	4.32	-1.105	13.26	1.6
1/18/2013	6:32:00	15.253	14.611	0.642	1.481	4.32	-1.121	13.45	1.6
1/18/2013	6:47:00	15.251	14.630	0.621	1.433	4.32	-1.073	12.87	1.6
1/18/2013	7:02:00	15.251	14.624	0.627	1.446	4.32	-1.086	13.04	1.6
1/18/2013	7:17:00	15.246	14.620	0.626	1.444	4.32	-1.084	13.01	1.6
1/18/2013	7:32:00	15.240	14.643	0.597	1.377	4.32	-1.017	12.21	1.6
1/18/2013	7:47:00	15.247	14.647	0.600	1.384	4.32	-1.024	12.29	1.6
1/18/2013	8:02:00	15.247	14.651	0.596	1.375	4.32	-1.015	12.18	1.6
1/18/2013	8:17:00	15.256	14.654	0.602	1.389	4.32	-1.029	12.35	1.6
1/18/2013	8:32:00	15.258	14.659	0.599	1.382	4.32	-1.022	12.26	1.6

1/18/2013	8:47:00	15.257	14.664	0.593	1.368	4.32	-1.008	12.10	1.6
1/18/2013	9:02:00	15.259	14.676	0.583	1.345	4.32	-0.985	11.82	1.6
1/18/2013	9:17:00	15.257	14.677	0.580	1.338	4.32	-0.978	11.74	1.6
1/18/2013	9:32:00	15.259	14.685	0.574	1.324	4.32	-0.964	11.57	1.6
1/18/2013	9:47:00	15.269	14.681	0.588	1.357	4.32	-0.997	11.96	1.6
1/18/2013	10:02:00	15.264	14.693	0.571	1.317	4.32	-0.957	11.49	1.6
1/18/2013	10:17:00	15.268	14.694	0.574	1.324	4.32	-0.964	11.57	1.6
1/18/2013	10:32:00	15.263	14.697	0.566	1.306	4.32	-0.946	11.35	1.6
1/18/2013	10:47:00	15.260	14.690	0.570	1.315	4.32	-0.955	11.46	1.6
1/18/2013	11:02:00	15.260	14.696	0.564	1.301	4.32	-0.941	11.29	1.6
1/18/2013	11:17:00	15.264	14.694	0.570	1.315	4.32	-0.955	11.46	1.6
1/18/2013	11:32:00	15.257	14.695	0.562	1.297	4.32	-0.937	11.24	1.6
1/18/2013	11:47:00	15.255	14.692	0.563	1.299	4.32	-0.939	11.27	1.6
1/18/2013	12:02:00	15.250	14.683	0.567	1.308	4.32	-0.948	11.38	1.6
1/18/2013	12:17:00	15.244	14.687	0.557	1.285	4.32	-0.925	11.10	1.6
1/18/2013	12:32:00	15.233	14.682	0.551	1.271	4.32	-0.911	10.93	1.6
1/18/2013	12:47:00	15.234	14.678	0.556	1.283	4.32	-0.923	11.07	1.6
1/18/2013	13:02:00	15.231	14.676	0.555	1.280	4.32	-0.920	11.04	1.6
1/18/2013	13:17:00	15.231	14.681	0.550	1.269	4.32	-0.909	10.91	1.6
1/18/2013	13:32:00	15.228	14.679	0.549	1.267	4.32	-0.907	10.88	1.6
1/18/2013	13:47:00	15.223	14.677	0.546	1.260	4.32	-0.900	10.80	1.6
1/18/2013	14:02:00	15.221	14.678	0.543	1.253	4.32	-0.893	10.71	1.6
1/18/2013	14:17:00	15.221	14.676	0.545	1.257	4.32	-0.897	10.77	1.6
1/18/2013	14:32:00	15.211	14.679	0.532	1.227	4.32	-0.867	10.41	1.6
1/18/2013	14:47:00	15.215	14.676	0.539	1.243	4.32	-0.883	10.60	1.6
1/18/2013	15:02:00	15.211	14.680	0.531	1.225	4.32	-0.865	10.38	1.6
1/18/2013	15:17:00	15.209	14.681	0.528	1.218	4.32	-0.858	10.30	1.6
1/18/2013	15:32:00	15.210	14.682	0.528	1.218	4.32	-0.858	10.30	1.6
1/18/2013	15:47:00	15.213	14.683	0.530	1.223	4.32	-0.863	10.35	1.6
1/18/2013	16:02:00	15.210	14.685	0.525	1.211	4.32	-0.851	10.21	1.6
1/18/2013	16:17:00	15.210	14.686	0.524	1.209	4.32	-0.849	10.19	1.6
1/18/2013	16:32:00	15.211	14.687	0.524	1.209	4.32	-0.849	10.19	1.6
1/18/2013	16:47:00	15.204	14.690	0.514	1.186	4.32	-0.826	9.91	1.6
1/18/2013	17:02:00	15.206	14.693	0.513	1.183	4.32	-0.823	9.88	1.6
1/18/2013	17:17:00	15.208	14.688	0.520	1.200	4.32	-0.840	10.08	1.6
1/18/2013	17:32:00	15.213	14.688	0.525	1.211	4.32	-0.851	10.21	1.6
1/18/2013	17:47:00	15.206	14.694	0.512	1.181	4.32	-0.821	9.85	1.6
1/18/2013	18:02:00	15.207	14.692	0.515	1.188	4.32	-0.828	9.94	1.6
1/18/2013	18:17:00	15.207	14.698	0.509	1.174	4.32	-0.814	9.77	1.6
1/18/2013	18:32:00	15.207	14.706	0.501	1.156	4.32	-0.796	9.55	1.6
1/18/2013	18:47:00	15.211	14.700	0.511	1.179	4.32	-0.819	9.83	1.6
1/18/2013	19:02:00	15.213	14.718	0.495	1.142	4.32	-0.782	9.38	1.6
1/18/2013	19:17:00	15.211	14.694	0.517	1.193	4.32	-0.833	9.99	1.6
1/18/2013	19:32:00	15.208	14.701	0.507	1.170	4.32	-0.810	9.72	1.6
1/18/2013	19:47:00	15.212	14.698	0.514	1.186	4.32	-0.826	9.91	1.6
1/18/2013	20:02:00	15.210	14.714	0.496	1.144	4.32	-0.784	9.41	1.6
1/18/2013	20:17:00	15.208	14.715	0.493	1.137	4.32	-0.777	9.33	1.6
1/18/2013	20:32:00	15.205	14.702	0.503	1.160	4.32	-0.800	9.61	1.6
1/18/2013	20:47:00	15.204	14.712	0.492	1.135	4.32	-0.775	9.30	1.6
1/18/2013	21:02:00	15.206	14.710	0.496	1.144	4.32	-0.784	9.41	1.6
1/18/2013	21:17:00	15.201	14.713	0.488	1.126	4.32	-0.766	9.19	1.6
1/18/2013	21:32:00	15.203	14.711	0.492	1.135	4.32	-0.775	9.30	1.6
1/18/2013	21:47:00	15.202	14.712	0.490	1.130	4.32	-0.770	9.25	1.6
1/18/2013	22:02:00	15.196	14.706	0.490	1.130	4.32	-0.770	9.25	1.6
1/18/2013	22:17:00	15.194	14.706	0.488	1.126	4.32	-0.766	9.19	1.6
1/18/2013	22:32:00	15.196	14.708	0.488	1.126	4.32	-0.766	9.19	1.6
1/18/2013	22:47:00	15.191	14.703	0.488	1.126	4.32	-0.766	9.19	1.6
1/18/2013	23:02:00	15.192	14.698	0.494	1.140	4.32	-0.780	9.36	1.6
1/18/2013	23:17:00	15.193	14.703	0.490	1.130	4.32	-0.770	9.25	1.6
1/18/2013	23:32:00	15.184	14.700	0.484	1.117	4.32	-0.757	9.08	1.6
1/18/2013	23:47:00	15.185	14.694	0.491	1.133	4.32	-0.773	9.27	1.6
1/19/2013	0:02:00	15.183	14.700	0.483	1.114	4.32	-0.754	9.05	1E-06
1/19/2013	0:17:00	15.182	14.694	0.488	1.126	4.32	-0.766	9.19	
1/19/2013	0:32:00	15.179	14.704	0.475	1.096	4.32	-0.736	8.83	
1/19/2013	0:47:00	15.183	14.689	0.494	1.140	4.32	-0.780	9.36	
1/19/2013	1:02:00	15.173	14.702	0.471	1.087	4.32	-0.727	8.72	
1/19/2013	1:17:00	15.173	14.693	0.480	1.107	4.32	-0.747	8.97	
1/19/2013	1:32:00	15.172	14.702	0.470	1.084	4.32	-0.724	8.69	
1/19/2013	1:47:00	15.175	14.702	0.473	1.091	4.32	-0.731	8.77	
1/19/2013	2:02:00	15.173	14.692	0.481	1.110	4.32	-0.750	9.00	
1/19/2013	2:17:00	15.174	14.700	0.474	1.094	4.32	-0.734	8.80	
1/19/2013	2:32:00	15.171	14.691	0.480	1.107	4.32	-0.747	8.97	
1/19/2013	2:47:00	15.169	14.688	0.481	1.110	4.32	-0.750	9.00	
1/19/2013	3:02:00	15.161	14.693	0.468	1.080	4.32	-0.720	8.64	
1/19/2013	3:17:00	15.158	14.692	0.466	1.075	4.32	-0.715	8.58	
1/19/2013	3:32:00	15.153	14.688	0.465	1.073	4.32	-0.713	8.55	
1/19/2013	3:47:00	15.152	14.694	0.458	1.057	4.32	-0.697	8.36	
1/19/2013	4:02:00	15.142	14.684	0.458	1.057	4.32	-0.697	8.36	
1/19/2013	4:17:00	15.135	14.682	0.453	1.045	4.32	-0.685	8.22	
1/19/2013	4:32:00	15.134	14.690	0.444	1.024	4.32	-0.664	7.97	
1/19/2013	4:47:00	15.129	14.681	0.448	1.034	4.32	-0.674	8.08	
1/19/2013	5:02:00	15.126	14.686	0.440	1.015	4.32	-0.655	7.86	
1/19/2013	5:17:00	15.120	14.684	0.436	1.006	4.32	-0.646	7.75	
1/19/2013	5:32:00	15.122	14.685	0.437	1.008	4.32	-0.648	7.78	
1/19/2013	5:47:00	15.125	14.687	0.438	1.010	4.32	-0.650	7.81	
1/19/2013	6:02:00	15.105	14.686	0.419	0.967	4.32	-0.607	7.28	
1/19/2013	6:17:00	15.103	14.689	0.414	0.955	4.32	-0.595	7.14	
1/19/2013	6:32:00	15.099	14.694	0.405	0.934	4.32	-0.574	6.89	
1/19/2013	6:47:00	15.098	14.677	0.421	0.971	4.32	-0.611	7.33	
1/19/2013	7:02:00	15.092	14.674	0.418	0.964	4.32	-0.604	7.25	
1/19/2013	7:17:00	15.090	14.679	0.411	0.948	4.32	-0.588	7.06	
1/19/2013	7:32:00	15.090	14.689	0.401	0.925	4.32	-0.565	6.78	
1/19/2013	7:47:00	15.084	14.681	0.403	0.930	4.32	-0.570	6.84	
1/19/2013	8:02:00	15.081	14.686	0.395	0.911	4.32	-0.551	6.62	
1/19/2013	8:17:00	15.087	14.686	0.401	0.925	4.32	-0.565	6.78	
1/19/2013	8:32:00	15.087	14.684	0.403	0.930	4.32	-0.570	6.84	
1/19/2013	8:47:00	15.087	14.688	0.399	0.920	4.32	-0.560	6.73	
1/19/2013	9:02:00	15.084	14.687	0.397	0.916	4.32	-0.556	6.67	
1/19/2013	9:17:00	15.084	14.689	0.395	0.911	4.32	-0.551	6.62	
1/19/2013	9:32:00	15.079	14.688	0.391	0.902	4.32	-0.542	6.50	
1/19/2013	9:47:00	15.077	14.686	0.391	0.902	4.32	-0.542	6.50	
1/19/2013	10:02:00	15.077	14.682	0.395	0.911	4.32	-0.551	6.62	
1/19/2013	10:17:00	15.074	14.683	0.391	0.902	4.32	-0.542	6.50	
1/19/2013	10:32:00	15.071	14.687	0.384	0.886	4.32	-0.526	6.31	
1/19/2013	10:47:00	15.072	14.679	0.393	0.907	4.32	-0.547	6.56	
1/19/2013	11:02:00	15.064	14.670	0.394	0.909	4.32	-0.549	6.59	
1/19/2013	11:17:00	15.055	14.668	0.387	0.893	4.32	-0.533	6.39	
1/19/2013	11:32:00	15.044	14.663	0.381	0.879	4.32	-0.519	6.23	
1/19/2013	11:47:00	15.042	14.656	0.386	0.891	4.32	-0.531	6.37	
1/19/2013	12:02:00	15.035	14.645	0.390	0.900	4.32	-0.540	6.48	
1/19/2013	12:17:00	15.022	14.634	0.388	0.895	4.32	-0.535	6.42	
1/19/2013	12:32:00	15.018	14.628	0.390	0.900	4.32	-0.540	6.48	
1/19/2013	12:47:00	15.014	14.627	0.387	0.893	4.32	-0.533	6.39	
1/19/2013	13:02:00	15.004	14.616	0.388	0.895	4.32	-0.535	6.42	
1/19/2013	13:17:00	15.003	14.618	0.385	0.888	4.32	-0.528	6.34	
1/19/2013	13:32:00	14.994	14.609	0.385	0.888	4.32	-0.528	6.34	
1/19/2013	13:47:00	14.987	14.601	0.386	0.891	4.32	-0.531	6.37	
1/19/2013	14:02:00	14.987	14.601	0.386	0.891	4.32	-0.531	6.37	
1/19/2013	14:17:00	14.984	14.597	0.387	0.893	4.32	-0.533	6.39	
1/19/2013	14:32:00	14.975	14.595	0.380	0.877	4.32	-0.517	6.20	
1/19/2013	14:47:00	14.971	14.588	0.383	0.884	4.32	-0.524	6.28	
1/19/2013	15:02:00	14.964	14.584	0.380	0.877	4.32	-0.517	6.20	
1/19/2013	15:17:00	14.959	14.586	0.373	0.861	4.32	-0.501	6.01	
1/19/2013	15:32:00	14.961	14.582	0.379	0.874	4.32	-0.514	6.17	
1/19/2013	15:47:00	14.955	14.583	0.372	0.858	4.32	-0.498	5.98	
1/19/2013	16:02:00	14.953	14.583	0.370	0.854	4.32	-0.494	5.92	
1/19/2013	16:17:00	14.951	14.575	0.376	0.867	4.32	-0.507	6.09	
1/19/2013	16:32:00	14.948	14.577	0.371	0.856	4.32	-0.496	5.95	
1/19/2013	16:47:00	14.950	14.570	0.380	0.877	4.32	-0.517	6.20	
1/19/2013	17:02:00	14.944	14.570	0.374	0.863	4.32	-0.503	6.03	
1/19/2013	17:17:00	14.940	14.572	0.368	0.849	4.32	-0.489	5.87	
1/19/2013	17:32:00	14.945	14.568	0.377	0.870	4.32	-0.510	6.12	
1/19/2013	17:47:00	14.934	14.567	0.367	0.847	4.32	-0.487	5.84	

1/19/2013	18:02:00	14.937	14.570	0.367	0.847	4.32	-0.487	5.84
1/19/2013	18:17:00	14.933	14.560	0.373	0.861	4.32	-0.501	6.01
1/19/2013	18:32:00	14.934	14.565	0.369	0.851	4.32	-0.491	5.90
1/19/2013	18:47:00	14.935	14.573	0.362	0.835	4.32	-0.475	5.70
1/19/2013	19:02:00	14.931	14.572	0.359	0.828	4.32	-0.468	5.62
1/19/2013	19:17:00	14.936	14.571	0.365	0.842	4.32	-0.482	5.78
1/19/2013	19:32:00	14.937	14.563	0.374	0.863	4.32	-0.503	6.03
1/19/2013	19:47:00	14.940	14.566	0.374	0.863	4.32	-0.503	6.03
1/19/2013	20:02:00	14.930	14.577	0.353	0.814	4.32	-0.454	5.45
1/19/2013	20:17:00	14.933	14.575	0.358	0.826	4.32	-0.466	5.59
1/19/2013	20:32:00	14.926	14.574	0.352	0.812	4.32	-0.452	5.42
1/19/2013	20:47:00	14.934	14.573	0.361	0.833	4.32	-0.473	5.67
1/19/2013	21:02:00	14.926	14.566	0.360	0.831	4.32	-0.471	5.65
1/19/2013	21:17:00	14.922	14.569	0.353	0.814	4.32	-0.454	5.45
1/19/2013	21:32:00	14.914	14.568	0.346	0.798	4.32	-0.438	5.26
1/19/2013	21:47:00	14.914	14.562	0.352	0.812	4.32	-0.452	5.42
1/19/2013	22:02:00	14.908	14.554	0.354	0.817	4.32	-0.457	5.48
1/19/2013	22:17:00	14.908	14.564	0.344	0.794	4.32	-0.434	5.20
1/19/2013	22:32:00	14.901	14.558	0.343	0.791	4.32	-0.431	5.18
1/19/2013	22:47:00	14.897	14.558	0.339	0.782	4.32	-0.422	5.06
1/19/2013	23:02:00	14.893	14.560	0.333	0.768	4.32	-0.408	4.90
1/19/2013	23:17:00	14.887	14.539	0.348	0.803	4.32	-0.443	5.31
1/19/2013	23:32:00	14.884	14.541	0.343	0.791	4.32	-0.431	5.18
1/19/2013	23:47:00	14.889	14.539	0.350	0.807	4.32	-0.447	5.37
1/20/2013	0:02:00	14.879	14.546	0.333	0.768	4.32	-0.408	4.90
1/20/2013	0:17:00	14.885	14.542	0.343	0.791	4.32	-0.431	5.18
1/20/2013	0:32:00	14.871	14.531	0.340	0.784	4.32	-0.424	5.09
1/20/2013	0:47:00	14.863	14.537	0.326	0.752	4.32	-0.392	4.70
1/20/2013	1:02:00	14.858	14.540	0.318	0.734	4.32	-0.374	4.48
1/20/2013	1:17:00	14.853	14.532	0.321	0.741	4.32	-0.381	4.57
1/20/2013	1:32:00	14.852	14.531	0.321	0.741	4.32	-0.381	4.57
1/20/2013	1:47:00	14.845	14.531	0.314	0.724	4.32	-0.364	4.37
1/20/2013	2:02:00	14.845	14.531	0.314	0.724	4.32	-0.364	4.37
1/20/2013	2:17:00	14.843	14.534	0.309	0.713	4.32	-0.353	4.23
1/20/2013	2:32:00	14.842	14.522	0.320	0.738	4.32	-0.378	4.54
1/20/2013	2:47:00	14.840	14.506	0.334	0.771	4.32	-0.411	4.93
1/20/2013	3:02:00	14.840	14.511	0.329	0.759	4.32	-0.399	4.79
1/20/2013	3:17:00	14.838	14.506	0.332	0.766	4.32	-0.406	4.87
1/20/2013	3:32:00	14.835	14.532	0.303	0.699	4.32	-0.339	4.07
1/20/2013	3:47:00	14.833	14.511	0.322	0.743	4.32	-0.383	4.59
1/20/2013	4:02:00	14.832	14.508	0.324	0.747	4.32	-0.387	4.65
1/20/2013	4:17:00	14.833	14.511	0.322	0.743	4.32	-0.383	4.59
1/20/2013	4:32:00	14.831	14.508	0.323	0.745	4.32	-0.385	4.62
1/20/2013	4:47:00	14.829	14.507	0.322	0.743	4.32	-0.383	4.59
1/20/2013	5:02:00	14.824	14.500	0.324	0.747	4.32	-0.387	4.65
1/20/2013	5:17:00	14.824	14.507	0.317	0.731	4.32	-0.371	4.46
1/20/2013	5:32:00	14.822	14.507	0.315	0.727	4.32	-0.367	4.40
1/20/2013	5:47:00	14.821	14.500	0.321	0.741	4.32	-0.381	4.57
1/20/2013	6:02:00	14.816	14.514	0.302	0.697	4.32	-0.337	4.04
1/20/2013	6:17:00	14.815	14.495	0.320	0.738	4.32	-0.378	4.54
1/20/2013	6:32:00	14.815	14.501	0.314	0.724	4.32	-0.364	4.37
1/20/2013	6:47:00	14.816	14.508	0.308	0.711	4.32	-0.351	4.21
1/20/2013	7:02:00	14.821	14.499	0.322	0.743	4.32	-0.383	4.59
1/20/2013	7:17:00	14.818	14.512	0.306	0.706	4.32	-0.346	4.15
1/20/2013	7:32:00	14.822	14.513	0.309	0.713	4.32	-0.353	4.23
1/20/2013	7:47:00	14.825	14.524	0.301	0.694	4.32	-0.334	4.01
1/20/2013	8:02:00	14.821	14.512	0.309	0.713	4.32	-0.353	4.23
1/20/2013	8:17:00	14.827	14.514	0.313	0.722	4.32	-0.362	4.35
1/20/2013	8:32:00	14.828	14.512	0.316	0.729	4.32	-0.369	4.43
1/20/2013	8:47:00	14.824	14.514	0.310	0.715	4.32	-0.355	4.26
1/20/2013	9:02:00	14.825	14.510	0.315	0.727	4.32	-0.367	4.40
1/20/2013	9:17:00	14.828	14.515	0.313	0.722	4.32	-0.362	4.35
1/20/2013	9:32:00	14.830	14.524	0.306	0.706	4.32	-0.346	4.15
1/20/2013	9:47:00	14.836	14.520	0.316	0.729	4.32	-0.369	4.43
1/20/2013	10:02:00	14.827	14.518	0.309	0.713	4.32	-0.353	4.23
1/20/2013	10:17:00	14.831	14.521	0.310	0.715	4.32	-0.355	4.26
1/20/2013	10:32:00	14.827	14.517	0.310	0.715	4.32	-0.355	4.26
1/20/2013	10:47:00	14.834	14.513	0.321	0.741	4.32	-0.381	4.57
1/20/2013	11:02:00	14.822	14.515	0.307	0.708	4.32	-0.348	4.18
1/20/2013	11:17:00	14.821	14.507	0.314	0.724	4.32	-0.364	4.37
1/20/2013	11:32:00	14.830	14.502	0.328	0.757	4.32	-0.397	4.76
1/20/2013	11:47:00	14.817	14.499	0.318	0.734	4.32	-0.374	4.48
1/20/2013	12:02:00	14.806	14.496	0.310	0.715	4.32	-0.355	4.26
1/20/2013	12:17:00	14.801	14.491	0.310	0.715	4.32	-0.355	4.26
1/20/2013	12:32:00	14.795	14.487	0.308	0.711	4.32	-0.351	4.21
1/20/2013	12:47:00	14.793	14.486	0.307	0.708	4.32	-0.348	4.18
1/20/2013	13:02:00	14.791	14.481	0.310	0.715	4.32	-0.355	4.26
1/20/2013	13:17:00	14.782	14.480	0.302	0.697	4.32	-0.337	4.04
1/20/2013	13:32:00	14.778	14.475	0.303	0.699	4.32	-0.339	4.07
1/20/2013	13:47:00	14.781	14.468	0.313	0.722	4.32	-0.362	4.35
1/20/2013	14:02:00	14.777	14.465	0.312	0.720	4.32	-0.360	4.32
1/20/2013	14:17:00	14.778	14.467	0.311	0.717	4.32	-0.357	4.29
1/20/2013	14:32:00	14.776	14.464	0.312	0.720	4.32	-0.360	4.32
1/20/2013	14:47:00	14.771	14.462	0.309	0.713	4.32	-0.353	4.23
1/20/2013	15:02:00	14.770	14.459	0.311	0.717	4.32	-0.357	4.29
1/20/2013	15:17:00	14.772	14.460	0.312	0.720	4.32	-0.360	4.32
1/20/2013	15:32:00	14.769	14.461	0.308	0.711	4.32	-0.351	4.21
1/20/2013	15:47:00	14.770	14.467	0.303	0.699	4.32	-0.339	4.07
1/20/2013	16:02:00	14.765	14.466	0.299	0.690	4.32	-0.330	3.96
1/20/2013	16:17:00	14.766	14.460	0.306	0.706	4.32	-0.346	4.15
1/20/2013	16:32:00	14.763	14.464	0.299	0.690	4.32	-0.330	3.96
1/20/2013	16:47:00	14.764	14.466	0.298	0.687	4.32	-0.327	3.93
1/20/2013	17:02:00	14.765	14.465	0.300	0.692	4.32	-0.332	3.99
1/20/2013	17:17:00	14.770	14.465	0.305	0.704	4.32	-0.344	4.12
1/20/2013	17:32:00	14.770	14.467	0.303	0.699	4.32	-0.339	4.07
1/20/2013	17:47:00	14.777	14.474	0.303	0.699	4.32	-0.339	4.07
1/20/2013	18:02:00	14.777	14.475	0.302	0.697	4.32	-0.337	4.04
1/20/2013	18:17:00	14.775	14.476	0.299	0.690	4.32	-0.330	3.96
1/20/2013	18:32:00	14.780	14.480	0.300	0.692	4.32	-0.332	3.99
1/20/2013	18:47:00	14.780	14.480	0.300	0.692	4.32	-0.332	3.99
1/20/2013	19:02:00	14.779	14.484	0.295	0.681	4.32	-0.321	3.85
1/20/2013	19:17:00	14.779	14.485	0.294	0.678	4.32	-0.318	3.82
1/20/2013	19:32:00	14.785	14.485	0.300	0.692	4.32	-0.332	3.99
1/20/2013	19:47:00	14.779	14.485	0.294	0.678	4.32	-0.318	3.82
1/20/2013	20:02:00	14.776	14.484	0.292	0.674	4.32	-0.314	3.76
1/20/2013	20:17:00	14.778	14.486	0.292	0.674	4.32	-0.314	3.76
1/20/2013	20:32:00	14.779	14.493	0.286	0.660	4.32	-0.300	3.60
1/20/2013	20:47:00	14.790	14.494	0.296	0.683	4.32	-0.323	3.87
1/20/2013	21:02:00	14.788	14.496	0.292	0.674	4.32	-0.314	3.76
1/20/2013	21:17:00	14.789	14.492	0.297	0.685	4.32	-0.325	3.90
1/20/2013	21:32:00	14.794	14.499	0.295	0.681	4.32	-0.321	3.85
1/20/2013	21:47:00	14.793	14.502	0.291	0.671	4.32	-0.311	3.74
1/20/2013	22:02:00	14.790	14.499	0.291	0.671	4.32	-0.311	3.74
1/20/2013	22:17:00	14.790	14.501	0.289	0.667	4.32	-0.307	3.68
1/20/2013	22:32:00	14.790	14.508	0.282	0.651	4.32	-0.291	3.49
1/20/2013	22:47:00	14.792	14.503	0.289	0.667	4.32	-0.307	3.68
1/20/2013	23:02:00	14.788	14.501	0.287	0.662	4.32	-0.302	3.63
1/20/2013	23:17:00	14.784	14.499	0.285	0.657	4.32	-0.297	3.57
1/20/2013	23:32:00	14.785	14.502	0.283	0.653	4.32	-0.293	3.51
1/20/2013	23:47:00	14.782	14.494	0.288	0.664	4.32	-0.304	3.65
1/21/2013	0:02:00	14.779	14.508	0.271	0.625	4.32	-0.265	3.18
1/21/2013	0:17:00	14.775	14.503	0.272	0.628	4.32	-0.268	3.21
1/21/2013	0:32:00	14.768	14.499	0.269	0.621	4.32	-0.261	3.13
1/21/2013	0:47:00	14.768	14.504	0.264	0.609	4.32	-0.249	2.99
1/21/2013	1:02:00	14.768	14.506	0.262	0.604	4.32	-0.244	2.93
1/21/2013	1:17:00	14.768	14.493	0.275	0.634	4.32	-0.274	3.29
1/21/2013	1:32:00	14.762	14.505	0.257	0.593	4.32	-0.233	2.79
1/21/2013	1:47:00	14.767	14.480	0.287	0.662	4.32	-0.302	3.63
1/21/2013	2:02:00	14.760	14.486	0.274	0.632	4.32	-0.272	3.27
1/21/2013	2:17:00	14.757	14.487	0.270	0.623	4.32	-0.263	3.15
1/21/2013	2:32:00	14.765	14.499	0.266	0.614	4.32	-0.254	3.04
1/21/2013	2:47:00	14.765	14.498	0.267	0.616	4.32	-0.256	3.07
1/21/2013	3:02:00	14.760	14.484	0.276	0.637	4.32	-0.277	3.32

1/21/2013	3:17:00	14.762	14.499	0.263	0.607	4.32	-0.247	2.96
1/21/2013	3:32:00	14.767	14.500	0.267	0.616	4.32	-0.256	3.07
1/21/2013	3:47:00	14.755	14.495	0.260	0.600	4.32	-0.240	2.88
1/21/2013	4:02:00	14.757	14.473	0.284	0.655	4.32	-0.295	3.54
1/21/2013	4:17:00	14.756	14.470	0.286	0.660	4.32	-0.300	3.60
1/21/2013	4:32:00	14.752	14.491	0.261	0.602	4.32	-0.242	2.91
1/21/2013	4:47:00	14.756	14.473	0.283	0.653	4.32	-0.293	3.51
1/21/2013	5:02:00	14.754	14.495	0.259	0.598	4.32	-0.238	2.85
1/21/2013	5:17:00	14.750	14.484	0.266	0.614	4.32	-0.254	3.04
1/21/2013	5:32:00	14.751	14.484	0.267	0.616	4.32	-0.256	3.07
1/21/2013	5:47:00	14.753	14.483	0.270	0.623	4.32	-0.263	3.15
1/21/2013	6:02:00	14.754	14.488	0.266	0.614	4.32	-0.254	3.04
1/21/2013	6:17:00	14.746	14.470	0.276	0.637	4.32	-0.277	3.32
1/21/2013	6:32:00	14.750	14.472	0.278	0.641	4.32	-0.281	3.38
1/21/2013	6:47:00	14.753	14.479	0.274	0.632	4.32	-0.272	3.27
1/21/2013	7:02:00	14.749	14.488	0.261	0.602	4.32	-0.242	2.91
1/21/2013	7:17:00	14.755	14.477	0.278	0.641	4.32	-0.281	3.38
1/21/2013	7:32:00	14.757	14.475	0.282	0.651	4.32	-0.291	3.49
1/21/2013	7:47:00	14.762	14.490	0.272	0.628	4.32	-0.268	3.21
1/21/2013	8:02:00	14.760	14.489	0.271	0.625	4.32	-0.265	3.18
1/21/2013	8:17:00	14.762	14.492	0.270	0.623	4.32	-0.263	3.15
1/21/2013	8:32:00	14.756	14.503	0.253	0.584	4.32	-0.224	2.68
1/21/2013	8:47:00	14.769	14.500	0.269	0.621	4.32	-0.261	3.13
1/21/2013	9:02:00	14.769	14.498	0.271	0.625	4.32	-0.265	3.18
1/21/2013	9:17:00	14.769	14.497	0.272	0.628	4.32	-0.268	3.21
1/21/2013	9:32:00	14.768	14.491	0.277	0.639	4.32	-0.279	3.35
1/21/2013	9:47:00	14.762	14.491	0.271	0.625	4.32	-0.265	3.18
1/21/2013	10:02:00	14.764	14.490	0.274	0.632	4.32	-0.272	3.27
1/21/2013	10:17:00	14.763	14.489	0.274	0.632	4.32	-0.272	3.27
1/21/2013	10:32:00	14.755	14.486	0.269	0.621	4.32	-0.261	3.13
1/21/2013	10:47:00	14.756	14.484	0.272	0.628	4.32	-0.268	3.21
1/21/2013	11:02:00	14.751	14.482	0.269	0.621	4.32	-0.261	3.13
1/21/2013	11:17:00	14.748	14.477	0.271	0.625	4.32	-0.265	3.18
1/21/2013	11:32:00	14.746	14.467	0.279	0.644	4.32	-0.284	3.40
1/21/2013	11:47:00	14.737	14.464	0.273	0.630	4.32	-0.270	3.24
1/21/2013	12:02:00	14.737	14.459	0.278	0.641	4.32	-0.281	3.38
1/21/2013	12:17:00	14.731	14.451	0.280	0.646	4.32	-0.286	3.43
1/21/2013	12:32:00	14.729	14.446	0.283	0.653	4.32	-0.293	3.51
1/21/2013	12:47:00	14.720	14.442	0.278	0.641	4.32	-0.281	3.38
1/21/2013	13:02:00	14.710	14.444	0.266	0.614	4.32	-0.254	3.04
1/21/2013	13:17:00	14.714	14.440	0.274	0.632	4.32	-0.272	3.27
1/21/2013	13:32:00	14.709	14.437	0.272	0.628	4.32	-0.268	3.21
1/21/2013	13:47:00	14.702	14.434	0.268	0.618	4.32	-0.258	3.10
1/21/2013	14:02:00	14.701	14.431	0.270	0.623	4.32	-0.263	3.15
1/21/2013	14:17:00	14.691	14.424	0.267	0.616	4.32	-0.256	3.07
1/21/2013	14:32:00	14.686	14.419	0.267	0.616	4.32	-0.256	3.07
1/21/2013	14:47:00	14.690	14.423	0.267	0.616	4.32	-0.256	3.07
1/21/2013	15:02:00	14.687	14.424	0.263	0.607	4.32	-0.247	2.96
1/21/2013	15:17:00	14.687	14.425	0.262	0.604	4.32	-0.244	2.93
1/21/2013	15:32:00	14.686	14.416	0.270	0.623	4.32	-0.263	3.15
1/21/2013	15:47:00	14.690	14.421	0.269	0.621	4.32	-0.261	3.13
1/21/2013	16:02:00	14.687	14.424	0.263	0.607	4.32	-0.247	2.96
1/21/2013	16:17:00	14.688	14.421	0.267	0.616	4.32	-0.256	3.07
1/21/2013	16:32:00	14.686	14.422	0.264	0.609	4.32	-0.249	2.99
1/21/2013	16:47:00	14.685	14.422	0.263	0.607	4.32	-0.247	2.96
1/21/2013	17:02:00	14.690	14.420	0.270	0.623	4.32	-0.263	3.15
1/21/2013	17:17:00	14.683	14.419	0.264	0.609	4.32	-0.249	2.99
1/21/2013	17:32:00	14.688	14.414	0.274	0.632	4.32	-0.272	3.27
1/21/2013	17:47:00	14.686	14.420	0.266	0.614	4.32	-0.254	3.04
1/21/2013	18:02:00	14.690	14.419	0.271	0.625	4.32	-0.265	3.18
1/21/2013	18:17:00	14.691	14.419	0.272	0.628	4.32	-0.268	3.21
1/21/2013	18:32:00	14.682	14.415	0.267	0.616	4.32	-0.256	3.07
1/21/2013	18:47:00	14.685	14.420	0.265	0.611	4.32	-0.251	3.02
1/21/2013	19:02:00	14.686	14.425	0.261	0.602	4.32	-0.242	2.91
1/21/2013	19:17:00	14.686	14.424	0.262	0.604	4.32	-0.244	2.93
1/21/2013	19:32:00	14.692	14.430	0.262	0.604	4.32	-0.244	2.93
1/21/2013	19:47:00	14.689	14.427	0.262	0.604	4.32	-0.244	2.93
1/21/2013	20:02:00	14.686	14.424	0.262	0.604	4.32	-0.244	2.93
1/21/2013	20:17:00	14.693	14.432	0.261	0.602	4.32	-0.242	2.91
1/21/2013	20:32:00	14.706	14.437	0.269	0.621	4.32	-0.261	3.13
1/21/2013	20:47:00	14.701	14.440	0.261	0.602	4.32	-0.242	2.91
1/21/2013	21:02:00	14.709	14.446	0.263	0.607	4.32	-0.247	2.96
1/21/2013	21:17:00	14.707	14.447	0.260	0.600	4.32	-0.240	2.88
1/21/2013	21:32:00	14.712	14.444	0.268	0.618	4.32	-0.258	3.10
1/21/2013	21:47:00	14.709	14.447	0.262	0.604	4.32	-0.244	2.93
1/21/2013	22:02:00	14.715	14.449	0.266	0.614	4.32	-0.254	3.04
1/21/2013	22:17:00	14.712	14.454	0.258	0.595	4.32	-0.235	2.82
1/21/2013	22:32:00	14.714	14.455	0.259	0.598	4.32	-0.238	2.85
1/21/2013	22:47:00	14.721	14.453	0.268	0.618	4.32	-0.258	3.10
1/21/2013	23:02:00	14.722	14.453	0.269	0.621	4.32	-0.261	3.13
1/21/2013	23:17:00	14.716	14.455	0.261	0.602	4.32	-0.242	2.91
1/21/2013	23:32:00	14.714	14.452	0.262	0.604	4.32	-0.244	2.93
1/21/2013	23:47:00	14.714	14.453	0.261	0.602	4.32	-0.242	2.91
1/22/2013	0:02:00	14.717	14.456	0.261	0.602	4.32	-0.242	2.91
1/22/2013	0:17:00	14.718	14.450	0.268	0.618	4.32	-0.258	3.10
1/22/2013	0:32:00	14.710	14.462	0.248	0.572	4.32	-0.212	2.55
1/22/2013	0:47:00	14.716	14.459	0.257	0.593	4.32	-0.233	2.79
1/22/2013	1:02:00	14.711	14.449	0.262	0.604	4.32	-0.244	2.93
1/22/2013	1:17:00	14.713	14.451	0.262	0.604	4.32	-0.244	2.93
1/22/2013	1:32:00	14.712	14.475	0.237	0.547	4.32	-0.187	2.24
1/22/2013	1:47:00	14.718	14.469	0.249	0.574	4.32	-0.214	2.57
1/22/2013	2:02:00	14.729	14.470	0.259	0.598	4.32	-0.238	2.85
1/22/2013	2:17:00	14.724	14.467	0.257	0.593	4.32	-0.233	2.79
1/22/2013	2:32:00	14.727	14.470	0.257	0.593	4.32	-0.233	2.79
1/22/2013	2:47:00	14.728	14.480	0.248	0.572	4.32	-0.212	2.55
1/22/2013	3:02:00	14.737	14.481	0.256	0.591	4.32	-0.231	2.77
1/22/2013	3:17:00	14.737	14.474	0.263	0.607	4.32	-0.247	2.96
1/22/2013	3:32:00	14.729	14.475	0.254	0.586	4.32	-0.226	2.71
1/22/2013	3:47:00	14.728	14.476	0.252	0.581	4.32	-0.221	2.66
1/22/2013	4:02:00	14.728	14.475	0.253	0.584	4.32	-0.224	2.68
1/22/2013	4:17:00	14.734	14.478	0.256	0.591	4.32	-0.231	2.77
1/22/2013	4:32:00	14.736	14.476	0.260	0.600	4.32	-0.240	2.88
1/22/2013	4:47:00	14.738	14.480	0.258	0.595	4.32	-0.235	2.82
1/22/2013	5:02:00	14.742	14.495	0.247	0.570	4.32	-0.210	2.52
1/22/2013	5:17:00	14.746	14.497	0.249	0.574	4.32	-0.214	2.57
1/22/2013	5:32:00	14.749	14.511	0.238	0.549	4.32	-0.189	2.27
1/22/2013	5:47:00	14.754	14.489	0.265	0.611	4.32	-0.251	3.02
1/22/2013	6:02:00	14.758	14.515	0.243	0.561	4.32	-0.201	2.41
1/22/2013	6:17:00	14.765	14.523	0.242	0.558	4.32	-0.198	2.38
1/22/2013	6:32:00	14.774	14.515	0.259	0.598	4.32	-0.238	2.85
1/22/2013	6:47:00	14.772	14.536	0.236	0.544	4.32	-0.184	2.21
1/22/2013	7:02:00	14.776	14.534	0.242	0.558	4.32	-0.198	2.38
1/22/2013	7:17:00	14.781	14.532	0.249	0.574	4.32	-0.214	2.57
1/22/2013	7:32:00	14.787	14.514	0.273	0.630	4.32	-0.270	3.24
1/22/2013	7:47:00	14.783	14.528	0.255	0.588	4.32	-0.228	2.74
1/22/2013	8:02:00	14.791	14.534	0.257	0.593	4.32	-0.233	2.79
1/22/2013	8:17:00	14.790	14.543	0.247	0.570	4.32	-0.210	2.52
1/22/2013	8:32:00	14.789	14.541	0.248	0.572	4.32	-0.212	2.55
1/22/2013	8:47:00	14.799	14.551	0.248	0.572	4.32	-0.212	2.55
1/22/2013	9:02:00	14.802	14.549	0.253	0.584	4.32	-0.224	2.68
1/22/2013	9:17:00	14.809	14.557	0.252	0.581	4.32	-0.221	2.66
1/22/2013	9:32:00	14.809	14.566	0.243	0.561	4.32	-0.201	2.41
1/22/2013	9:47:00	14.816	14.558	0.258	0.595	4.32	-0.235	2.82
1/22/2013	10:02:00	14.817	14.557	0.260	0.600	4.32	-0.240	2.88
1/22/2013	10:17:00	14.819	14.570	0.249	0.574	4.32	-0.214	2.57
1/22/2013	10:32:00	14.815	14.566	0.249	0.574	4.32	-0.214	2.57
1/22/2013	10:47:00	14.817	14.562	0.255	0.588	4.32	-0.228	2.74
1/22/2013	11:02:00	14.819	14.565	0.254	0.586	4.32	-0.226	2.71
1/22/2013	11:17:00	14.815	14.563	0.252	0.581	4.32	-0.221	2.66
1/22/2013	11:32:00	14.812	14.559	0.253	0.584	4.32	-0.224	2.68
1/22/2013	11:47:00	14.811	14.555	0.256	0.591	4.32	-0.231	2.77
1/22/2013	12:02:00	14.802	14.550	0.252	0.581	4.32	-0.221	2.66
1/22/2013	12:17:00	14.803	14.548	0.255	0.588	4.32	-0.228	2.74

1/22/2013	12:32:00	14.804	14.550	0.254	0.586	4.32	-0.226	2.71
1/22/2013	12:47:00	14.796	14.544	0.252	0.581	4.32	-0.221	2.66
1/22/2013	13:02:00	14.799	14.542	0.257	0.593	4.32	-0.233	2.79
1/22/2013	13:17:00	14.793	14.540	0.253	0.584	4.32	-0.224	2.68
1/22/2013	13:32:00	14.791	14.537	0.254	0.586	4.32	-0.226	2.71
1/22/2013	13:47:00	14.785	14.537	0.248	0.572	4.32	-0.212	2.55
1/22/2013	14:02:00	14.790	14.539	0.251	0.579	4.32	-0.219	2.63
1/22/2013	14:17:00	14.797	14.534	0.263	0.607	4.32	-0.247	2.96
1/22/2013	14:32:00	14.786	14.544	0.242	0.558	4.32	-0.198	2.38
1/22/2013	14:47:00	14.789	14.540	0.249	0.574	4.32	-0.214	2.57
1/22/2013	15:02:00	14.783	14.543	0.240	0.554	4.32	-0.194	2.32
1/22/2013	15:17:00	14.784	14.539	0.245	0.565	4.32	-0.205	2.46
1/22/2013	15:32:00	14.803	14.544	0.259	0.598	4.32	-0.238	2.85
1/22/2013	15:47:00	14.793	14.541	0.252	0.581	4.32	-0.221	2.66
1/22/2013	16:02:00	14.785	14.537	0.248	0.572	4.32	-0.212	2.55
1/22/2013	16:17:00	14.789	14.545	0.244	0.563	4.32	-0.203	2.43
1/22/2013	16:32:00	14.787	14.541	0.246	0.568	4.32	-0.208	2.49
1/22/2013	16:47:00	14.790	14.544	0.246	0.568	4.32	-0.208	2.49
1/22/2013	17:02:00	14.790	14.547	0.243	0.561	4.32	-0.201	2.41
1/22/2013	17:17:00	14.793	14.554	0.239	0.551	4.32	-0.191	2.30
1/22/2013	17:32:00	14.795	14.543	0.252	0.581	4.32	-0.221	2.66
1/22/2013	17:47:00	14.797	14.547	0.250	0.577	4.32	-0.217	2.60
1/22/2013	18:02:00	14.794	14.553	0.241	0.556	4.32	-0.196	2.35
1/22/2013	18:17:00	14.792	14.549	0.243	0.561	4.32	-0.201	2.41
1/22/2013	18:32:00	14.803	14.557	0.246	0.568	4.32	-0.208	2.49
1/22/2013	18:47:00	14.803	14.560	0.243	0.561	4.32	-0.201	2.41
1/22/2013	19:02:00	14.802	14.560	0.242	0.558	4.32	-0.198	2.38
1/22/2013	19:17:00	14.808	14.565	0.243	0.561	4.32	-0.201	2.41
1/22/2013	19:32:00	14.810	14.560	0.250	0.577	4.32	-0.217	2.60
1/22/2013	19:47:00	14.805	14.563	0.242	0.558	4.32	-0.198	2.38
1/22/2013	20:02:00	14.807	14.559	0.248	0.572	4.32	-0.212	2.55
1/22/2013	20:17:00	14.803	14.548	0.255	0.588	4.32	-0.228	2.74
1/22/2013	20:32:00	14.804	14.564	0.240	0.554	4.32	-0.194	2.32
1/22/2013	20:47:00	14.805	14.583	0.222	0.512	4.32	-0.152	1.83
1/22/2013	21:02:00	14.804	14.572	0.232	0.535	4.32	-0.175	2.10
1/22/2013	21:17:00	14.809	14.565	0.244	0.563	4.32	-0.203	2.43
1/22/2013	21:32:00	14.813	14.571	0.242	0.558	4.32	-0.198	2.38
1/22/2013	21:47:00	14.815	14.579	0.236	0.544	4.32	-0.184	2.21
1/22/2013	22:02:00	14.823	14.578	0.245	0.565	4.32	-0.205	2.46
1/22/2013	22:17:00	14.823	14.592	0.231	0.533	4.32	-0.173	2.08
1/22/2013	22:32:00	14.828	14.588	0.240	0.554	4.32	-0.194	2.32
1/22/2013	22:47:00	14.827	14.579	0.248	0.572	4.32	-0.212	2.55
1/22/2013	23:02:00	14.828	14.579	0.249	0.574	4.32	-0.214	2.57
1/22/2013	23:17:00	14.829	14.583	0.246	0.568	4.32	-0.208	2.49
1/22/2013	23:32:00	14.828	14.578	0.250	0.577	4.32	-0.217	2.60
1/22/2013	23:47:00	14.829	14.579	0.250	0.577	4.32	-0.217	2.60
1/23/2013	0:02:00	14.830	14.596	0.234	0.540	4.32	-0.180	2.16
1/23/2013	0:17:00	14.832	14.580	0.252	0.581	4.32	-0.221	2.66
1/23/2013	0:32:00	14.828	14.593	0.235	0.542	4.32	-0.182	2.19
1/23/2013	0:47:00	14.827	14.602	0.225	0.519	4.32	-0.159	1.91
1/23/2013	1:02:00	14.828	14.584	0.244	0.563	4.32	-0.203	2.43
1/23/2013	1:17:00	14.826	14.599	0.227	0.524	4.32	-0.164	1.96
1/23/2013	1:32:00	14.834	14.603	0.231	0.533	4.32	-0.173	2.08
1/23/2013	1:47:00	14.831	14.592	0.239	0.551	4.32	-0.191	2.30
1/23/2013	2:02:00	14.837	14.591	0.246	0.568	4.32	-0.208	2.49
1/23/2013	2:17:00	14.839	14.606	0.233	0.538	4.32	-0.178	2.13
1/23/2013	2:32:00	14.838	14.594	0.244	0.563	4.32	-0.203	2.43
1/23/2013	2:47:00	14.841	14.602	0.239	0.551	4.32	-0.191	2.30
1/23/2013	3:02:00	14.840	14.604	0.236	0.544	4.32	-0.184	2.21
1/23/2013	3:17:00	14.845	14.603	0.242	0.558	4.32	-0.198	2.38
1/23/2013	3:32:00	14.840	14.599	0.241	0.556	4.32	-0.196	2.35
1/23/2013	3:47:00	14.843	14.598	0.245	0.565	4.32	-0.205	2.46
1/23/2013	4:02:00	14.840	14.608	0.232	0.535	4.32	-0.175	2.10
1/23/2013	4:17:00	14.839	14.598	0.241	0.556	4.32	-0.196	2.35
1/23/2013	4:32:00	14.839	14.595	0.244	0.563	4.32	-0.203	2.43
1/23/2013	4:47:00	14.839	14.606	0.233	0.538	4.32	-0.178	2.13
1/23/2013	5:02:00	14.842	14.619	0.223	0.514	4.32	-0.154	1.85
1/23/2013	5:17:00	14.846	14.618	0.228	0.526	4.32	-0.166	1.99
1/23/2013	5:32:00	14.848	14.611	0.237	0.547	4.32	-0.187	2.24
1/23/2013	5:47:00	14.847	14.609	0.238	0.549	4.32	-0.189	2.27
1/23/2013	6:02:00	14.850	14.620	0.230	0.531	4.32	-0.171	2.05
1/23/2013	6:17:00	14.853	14.605	0.248	0.572	4.32	-0.212	2.55
1/23/2013	6:32:00	14.852	14.630	0.222	0.512	4.32	-0.152	1.83
1/23/2013	6:47:00	14.855	14.616	0.239	0.551	4.32	-0.191	2.30
1/23/2013	7:02:00	14.852	14.629	0.223	0.514	4.32	-0.154	1.85
1/23/2013	7:17:00	14.859	14.615	0.244	0.563	4.32	-0.203	2.43
1/23/2013	7:32:00	14.855	14.619	0.236	0.544	4.32	-0.184	2.21
1/23/2013	7:47:00	14.862	14.630	0.232	0.535	4.32	-0.175	2.10
1/23/2013	8:02:00	14.866	14.636	0.230	0.531	4.32	-0.171	2.05
1/23/2013	8:17:00	14.862	14.622	0.240	0.554	4.32	-0.194	2.32
1/23/2013	8:32:00	14.862	14.626	0.236	0.544	4.32	-0.184	2.21
1/23/2013	8:47:00	14.865	14.638	0.227	0.524	4.32	-0.164	1.96
1/23/2013	9:02:00	14.868	14.635	0.233	0.538	4.32	-0.178	2.13
1/23/2013	9:17:00	14.873	14.641	0.232	0.535	4.32	-0.175	2.10
1/23/2013	9:32:00	14.871	14.644	0.227	0.524	4.32	-0.164	1.96
1/23/2013	9:47:00	14.877	14.637	0.240	0.554	4.32	-0.194	2.32
1/23/2013	10:02:00	14.878	14.640	0.238	0.549	4.32	-0.189	2.27
1/23/2013	10:17:00	14.881	14.643	0.238	0.549	4.32	-0.189	2.27
1/23/2013	10:32:00	14.876	14.637	0.239	0.551	4.32	-0.191	2.30
1/23/2013	10:47:00	14.878	14.634	0.244	0.563	4.32	-0.203	2.43
1/23/2013	11:02:00	14.875	14.635	0.240	0.554	4.32	-0.194	2.32
1/23/2013	11:17:00	14.872	14.631	0.241	0.556	4.32	-0.196	2.35
1/23/2013	11:32:00	14.874	14.626	0.248	0.572	4.32	-0.212	2.55
1/23/2013	11:47:00	14.868	14.618	0.250	0.577	4.32	-0.217	2.60
1/23/2013	12:02:00	14.867	14.615	0.252	0.581	4.32	-0.221	2.66
1/23/2013	12:17:00	14.856	14.610	0.246	0.568	4.32	-0.208	2.49
1/23/2013	12:32:00	14.851	14.604	0.247	0.570	4.32	-0.210	2.52
1/23/2013	12:47:00	14.848	14.593	0.255	0.588	4.32	-0.228	2.74
1/23/2013	13:02:00	14.842	14.588	0.254	0.586	4.32	-0.226	2.71
1/23/2013	13:17:00	14.832	14.582	0.250	0.577	4.32	-0.217	2.60
1/23/2013	13:32:00	14.829	14.572	0.257	0.593	4.32	-0.233	2.79
1/23/2013	13:47:00	14.828	14.571	0.257	0.593	4.32	-0.233	2.79
1/23/2013	14:02:00	14.821	14.568	0.253	0.584	4.32	-0.224	2.68
1/23/2013	14:17:00	14.815	14.565	0.250	0.577	4.32	-0.217	2.60
1/23/2013	14:32:00	14.819	14.566	0.253	0.584	4.32	-0.224	2.68
1/23/2013	14:47:00	14.817	14.565	0.252	0.581	4.32	-0.221	2.66
1/23/2013	15:02:00	14.807	14.560	0.247	0.570	4.32	-0.210	2.52
1/23/2013	15:17:00	14.810	14.562	0.248	0.572	4.32	-0.212	2.55
1/23/2013	15:32:00	14.808	14.561	0.247	0.570	4.32	-0.210	2.52
1/23/2013	15:47:00	14.805	14.561	0.244	0.563	4.32	-0.203	2.43
1/23/2013	16:02:00	14.802	14.553	0.249	0.574	4.32	-0.214	2.57
1/23/2013	16:17:00	14.805	14.556	0.249	0.574	4.32	-0.214	2.57
1/23/2013	16:32:00	14.798	14.550	0.248	0.572	4.32	-0.212	2.55
1/23/2013	16:47:00	14.794	14.546	0.248	0.572	4.32	-0.212	2.55
1/23/2013	17:02:00	14.792	14.544	0.248	0.572	4.32	-0.212	2.55
1/23/2013	17:17:00	14.795	14.550	0.245	0.565	4.32	-0.205	2.46
1/23/2013	17:32:00	14.790	14.541	0.249	0.574	4.32	-0.214	2.57
1/23/2013	17:47:00	14.794	14.554	0.240	0.554	4.32	-0.194	2.32
1/23/2013	18:02:00	14.793	14.545	0.248	0.572	4.32	-0.212	2.55
1/23/2013	18:17:00	14.794	14.549	0.245	0.565	4.32	-0.205	2.46
1/23/2013	18:32:00	14.791	14.544	0.247	0.570	4.32	-0.210	2.52
1/23/2013	18:47:00	14.785	14.541	0.244	0.563	4.32	-0.203	2.43
1/23/2013	19:02:00	14.786	14.540	0.246	0.568	4.32	-0.208	2.49
1/23/2013	19:17:00	14.781	14.539	0.242	0.558	4.32	-0.198	2.38
1/23/2013	19:32:00	14.778	14.532	0.246	0.568	4.32	-0.208	2.49
1/23/2013	19:47:00	14.770	14.532	0.238	0.549	4.32	-0.189	2.27
1/23/2013	20:02:00	14.767	14.533	0.234	0.540	4.32	-0.180	2.16
1/23/2013	20:17:00	14.764	14.523	0.241	0.556	4.32	-0.196	2.35
1/23/2013	20:32:00	14.770	14.520	0.250	0.577	4.32	-0.217	2.60
1/23/2013	20:47:00	14.767	14.515	0.252	0.581	4.32	-0.221	2.66
1/23/2013	21:02:00	14.762	14.538	0.224	0.517	4.32	-0.157	1.88
1/23/2013	21:17:00	14.763	14.525	0.238	0.549	4.32	-0.189	2.27
1/23/2013	21:32:00	14.761	14.506	0.255	0.588	4.32	-0.228	2.74

1/23/2013	21:47:00	14.757	14.517	0.240	0.554	4.32	-0.194	2.32
1/23/2013	22:02:00	14.752	14.521	0.231	0.533	4.32	-0.173	2.08
1/23/2013	22:17:00	14.752	14.501	0.251	0.579	4.32	-0.219	2.63
1/23/2013	22:32:00	14.746	14.506	0.240	0.554	4.32	-0.194	2.32
1/23/2013	22:47:00	14.746	14.511	0.235	0.542	4.32	-0.182	2.19
1/23/2013	23:02:00	14.742	14.508	0.234	0.540	4.32	-0.180	2.16
1/23/2013	23:17:00	14.738	14.504	0.234	0.540	4.32	-0.180	2.16
1/23/2013	23:32:00	14.738	14.481	0.257	0.593	4.32	-0.233	2.79
1/23/2013	23:47:00	14.734	14.486	0.248	0.572	4.32	-0.212	2.55
1/24/2013	0:02:00	14.728	14.482	0.246	0.568	4.32	-0.208	2.49
1/24/2013	0:17:00	14.729	14.481	0.248	0.572	4.32	-0.212	2.55
1/24/2013	0:32:00	14.729	14.491	0.238	0.549	4.32	-0.189	2.27
1/24/2013	0:47:00	14.725	14.481	0.244	0.563	4.32	-0.203	2.43
1/24/2013	1:02:00	14.720	14.477	0.243	0.561	4.32	-0.201	2.41
1/24/2013	1:17:00	14.719	14.475	0.244	0.563	4.32	-0.203	2.43
1/24/2013	1:32:00	14.716	14.470	0.246	0.568	4.32	-0.208	2.49
1/24/2013	1:47:00	14.712	14.467	0.245	0.565	4.32	-0.205	2.46
1/24/2013	2:02:00	14.706	14.457	0.249	0.574	4.32	-0.214	2.57
1/24/2013	2:17:00	14.699	14.461	0.238	0.549	4.32	-0.189	2.27
1/24/2013	2:32:00	14.699	14.458	0.241	0.556	4.32	-0.196	2.35
1/24/2013	2:47:00	14.702	14.461	0.241	0.556	4.32	-0.196	2.35
1/24/2013	3:02:00	14.703	14.461	0.242	0.558	4.32	-0.198	2.38
1/24/2013	3:17:00	14.699	14.456	0.243	0.561	4.32	-0.201	2.41
1/24/2013	3:32:00	14.697	14.455	0.242	0.558	4.32	-0.198	2.38
1/24/2013	3:47:00	14.696	14.455	0.241	0.556	4.32	-0.196	2.35
1/24/2013	4:02:00	14.698	14.451	0.247	0.570	4.32	-0.210	2.52
1/24/2013	4:17:00	14.688	14.455	0.233	0.538	4.32	-0.178	2.13
1/24/2013	4:32:00	14.688	14.454	0.234	0.540	4.32	-0.180	2.16
1/24/2013	4:47:00	14.691	14.455	0.236	0.544	4.32	-0.184	2.21
1/24/2013	5:02:00	14.691	14.452	0.239	0.551	4.32	-0.191	2.30
1/24/2013	5:17:00	14.700	14.456	0.244	0.563	4.32	-0.203	2.43
1/24/2013	5:32:00	14.702	14.457	0.245	0.565	4.32	-0.205	2.46
1/24/2013	5:47:00	14.702	14.459	0.243	0.561	4.32	-0.201	2.41
1/24/2013	6:02:00	14.698	14.461	0.237	0.547	4.32	-0.187	2.24
1/24/2013	6:17:00	14.706	14.465	0.241	0.556	4.32	-0.196	2.35
1/24/2013	6:32:00	14.707	14.473	0.234	0.540	4.32	-0.180	2.16
1/24/2013	6:47:00	14.717	14.474	0.243	0.561	4.32	-0.201	2.41
1/24/2013	7:02:00	14.718	14.479	0.239	0.551	4.32	-0.191	2.30
1/24/2013	7:17:00	14.719	14.483	0.236	0.544	4.32	-0.184	2.21
1/24/2013	7:32:00	14.725	14.484	0.241	0.556	4.32	-0.196	2.35
1/24/2013	7:47:00	14.728	14.491	0.237	0.547	4.32	-0.187	2.24
1/24/2013	8:02:00	14.728	14.500	0.228	0.526	4.32	-0.166	1.99
1/24/2013	8:17:00	14.738	14.497	0.241	0.556	4.32	-0.196	2.35
1/24/2013	8:32:00	14.741	14.502	0.239	0.551	4.32	-0.191	2.30
1/24/2013	8:47:00	14.743	14.507	0.236	0.544	4.32	-0.184	2.21
1/24/2013	9:02:00	14.750	14.511	0.239	0.551	4.32	-0.191	2.30
1/24/2013	9:17:00	14.758	14.514	0.244	0.563	4.32	-0.203	2.43
1/24/2013	9:32:00	14.756	14.522	0.234	0.540	4.32	-0.180	2.16
1/24/2013	9:47:00	14.762	14.523	0.239	0.551	4.32	-0.191	2.30
1/24/2013	10:02:00	14.772	14.537	0.235	0.542	4.32	-0.182	2.19
1/24/2013	10:17:00	14.781	14.539	0.242	0.558	4.32	-0.198	2.38
1/24/2013	10:32:00	14.787	14.543	0.244	0.563	4.32	-0.203	2.43
1/24/2013	10:47:00	14.785	14.544	0.241	0.556	4.32	-0.196	2.35
1/24/2013	11:02:00	14.799	14.552	0.247	0.570	4.32	-0.210	2.52
1/24/2013	11:17:00	14.794	14.553	0.241	0.556	4.32	-0.196	2.35
1/24/2013	11:32:00	14.796	14.560	0.236	0.544	4.32	-0.184	2.21
1/24/2013	11:47:00	14.803	14.560	0.243	0.561	4.32	-0.201	2.41
1/24/2013	12:02:00	14.807	14.563	0.244	0.563	4.32	-0.203	2.43
1/24/2013	12:17:00	14.806	14.565	0.241	0.556	4.32	-0.196	2.35
1/24/2013	12:32:00	14.817	14.561	0.256	0.591	4.32	-0.231	2.77
1/24/2013	12:47:00	14.803	14.569	0.234	0.540	4.32	-0.180	2.16
1/24/2013	13:02:00	14.805	14.570	0.235	0.542	4.32	-0.182	2.19
1/24/2013	13:17:00	14.819	14.577	0.242	0.558	4.32	-0.198	2.38
1/24/2013	13:32:00	14.810	14.581	0.229	0.528	4.32	-0.168	2.02
1/24/2013	13:47:00	14.817	14.588	0.229	0.528	4.32	-0.168	2.02
1/24/2013	14:02:00	14.830	14.588	0.242	0.558	4.32	-0.198	2.38
1/24/2013	14:17:00	14.832	14.591	0.241	0.556	4.32	-0.196	2.35
1/24/2013	14:32:00	14.823	14.591	0.232	0.535	4.32	-0.175	2.10
1/24/2013	14:47:00	14.829	14.595	0.234	0.540	4.32	-0.180	2.16
1/24/2013	15:02:00	14.845	14.605	0.240	0.554	4.32	-0.194	2.32
1/24/2013	15:17:00	14.840	14.606	0.234	0.540	4.32	-0.180	2.16
1/24/2013	15:32:00	14.844	14.608	0.236	0.544	4.32	-0.184	2.21
1/24/2013	15:47:00	14.844	14.613	0.231	0.533	4.32	-0.173	2.08
1/24/2013	16:02:00	14.861	14.615	0.246	0.568	4.32	-0.208	2.49
1/24/2013	16:17:00	14.851	14.621	0.230	0.531	4.32	-0.171	2.05
1/24/2013	16:32:00	14.869	14.621	0.248	0.572	4.32	-0.212	2.55
1/24/2013	16:47:00	14.860	14.633	0.227	0.524	4.32	-0.164	1.96
1/24/2013	17:02:00	14.863	14.631	0.232	0.535	4.32	-0.175	2.10
1/24/2013	17:17:00	14.869	14.640	0.229	0.528	4.32	-0.168	2.02
1/24/2013	17:32:00	14.867	14.641	0.226	0.521	4.32	-0.161	1.94
1/24/2013	17:47:00	14.878	14.645	0.233	0.538	4.32	-0.178	2.13
1/24/2013	18:02:00	14.883	14.649	0.234	0.540	4.32	-0.180	2.16
1/24/2013	18:17:00	14.889	14.655	0.234	0.540	4.32	-0.180	2.16
1/24/2013	18:32:00	14.891	14.659	0.232	0.535	4.32	-0.175	2.10
1/24/2013	18:47:00	14.890	14.661	0.229	0.528	4.32	-0.168	2.02
1/24/2013	19:02:00	14.895	14.660	0.235	0.542	4.32	-0.182	2.19
1/24/2013	19:17:00	14.894	14.668	0.226	0.521	4.32	-0.161	1.94
1/24/2013	19:32:00	14.902	14.669	0.233	0.538	4.32	-0.178	2.13
1/24/2013	19:47:00	14.903	14.680	0.223	0.514	4.32	-0.154	1.85
1/24/2013	20:02:00	14.910	14.684	0.226	0.521	4.32	-0.161	1.94
1/24/2013	20:17:00	14.911	14.668	0.243	0.561	4.32	-0.201	2.41
1/24/2013	20:32:00	14.914	14.682	0.232	0.535	4.32	-0.175	2.10
1/24/2013	20:47:00	14.918	14.685	0.233	0.538	4.32	-0.178	2.13
1/24/2013	21:02:00	14.915	14.678	0.237	0.547	4.32	-0.187	2.24
1/24/2013	21:17:00	14.914	14.690	0.224	0.517	4.32	-0.157	1.88
1/24/2013	21:32:00	14.919	14.688	0.231	0.533	4.32	-0.173	2.08
1/24/2013	21:47:00	14.924	14.696	0.228	0.526	4.32	-0.166	1.99
1/24/2013	22:02:00	14.925	14.682	0.243	0.561	4.32	-0.201	2.41
1/24/2013	22:17:00	14.923	14.702	0.221	0.510	4.32	-0.150	1.80
1/24/2013	22:32:00	14.924	14.693	0.231	0.533	4.32	-0.173	2.08
1/24/2013	22:47:00	14.921	14.694	0.227	0.524	4.32	-0.164	1.96
1/24/2013	23:02:00	14.926	14.699	0.227	0.524	4.32	-0.164	1.96
1/24/2013	23:17:00	14.927	14.705	0.222	0.512	4.32	-0.152	1.83
1/24/2013	23:32:00	14.928	14.690	0.238	0.549	4.32	-0.189	2.27
1/24/2013	23:47:00	14.930	14.695	0.235	0.542	4.32	-0.182	2.19
1/25/2013	0:02:00	14.928	14.706	0.222	0.512	4.32	-0.152	1.83
1/25/2013	0:17:00	14.923	14.711	0.212	0.489	4.32	-0.129	1.55
1/25/2013	0:32:00	14.937	14.713	0.224	0.517	4.32	-0.157	1.88
1/25/2013	0:47:00	14.932	14.692	0.240	0.554	4.32	-0.194	2.32
1/25/2013	1:02:00	14.929	14.710	0.219	0.505	4.32	-0.145	1.74
1/25/2013	1:17:00	14.924	14.695	0.229	0.528	4.32	-0.168	2.02
1/25/2013	1:32:00	14.929	14.712	0.217	0.501	4.32	-0.141	1.69
1/25/2013	1:47:00	14.931	14.714	0.217	0.501	4.32	-0.141	1.69
1/25/2013	2:02:00	14.931	14.705	0.226	0.521	4.32	-0.161	1.94
1/25/2013	2:17:00	14.929	14.716	0.213	0.491	4.32	-0.131	1.58
1/25/2013	2:32:00	14.935	14.707	0.228	0.526	4.32	-0.166	1.99
1/25/2013	2:47:00	14.933	14.718	0.215	0.496	4.32	-0.136	1.63
1/25/2013	3:02:00	14.940	14.719	0.221	0.510	4.32	-0.150	1.80
1/25/2013	3:17:00	14.931	14.720	0.211	0.487	4.32	-0.127	1.52
1/25/2013	3:32:00	14.929	14.696	0.233	0.538	4.32	-0.178	2.13
1/25/2013	3:47:00	14.925	14.690	0.235	0.542	4.32	-0.182	2.19
1/25/2013	4:02:00	14.923	14.681	0.242	0.558	4.32	-0.198	2.38
1/25/2013	4:17:00	14.918	14.705	0.213	0.491	4.32	-0.131	1.58
1/25/2013	4:32:00	14.908	14.683	0.225	0.519	4.32	-0.159	1.91
1/25/2013	4:47:00	14.918	14.703	0.215	0.496	4.32	-0.136	1.63
1/25/2013	5:02:00	14.919	14.690	0.229	0.528	4.32	-0.168	2.02
1/25/2013	5:17:00	14.923	14.709	0.214	0.494	4.32	-0.134	1.60
1/25/2013	5:32:00	14.924	14.704	0.220	0.508	4.32	-0.148	1.77
1/25/2013	5:47:00	14.916	14.689	0.227	0.524	4.32	-0.164	1.96
1/25/2013	6:02:00	14.902	14.680	0.222	0.512	4.32	-0.152	1.83
1/25/2013	6:17:00	14.908	14.690	0.218	0.503	4.32	-0.143	1.72
1/25/2013	6:32:00	14.915	14.701	0.214	0.494	4.32	-0.134	1.60
1/25/2013	6:47:00	14.906	14.691	0.215	0.496	4.32	-0.136	1.63

1/25/2013	7:02:00	14.910	14.689	0.221	0.510	4.32	-0.150	1.80	
1/25/2013	7:17:00	14.907	14.690	0.217	0.501	4.32	-0.141	1.69	
1/25/2013	7:32:00	14.908	14.695	0.213	0.491	4.32	-0.131	1.58	
1/25/2013	7:47:00	14.906	14.672	0.234	0.540	4.32	-0.180	2.16	
1/25/2013	8:02:00	14.902	14.671	0.231	0.533	4.32	-0.173	2.08	
1/25/2013	8:17:00	14.905	14.669	0.236	0.544	4.32	-0.184	2.21	
1/25/2013	8:32:00	14.904	14.674	0.230	0.531	4.32	-0.171	2.05	
1/25/2013	8:47:00	14.911	14.671	0.240	0.554	4.32	-0.194	2.32	
1/25/2013	9:02:00	14.905	14.674	0.231	0.533	4.32	-0.173	2.08	
1/25/2013	9:17:00	14.893	14.677	0.216	0.498	4.32	-0.138	1.66	
1/25/2013	9:32:00	14.905	14.685	0.220	0.508	4.32	-0.148	1.77	
1/25/2013	9:47:00	14.900	14.658	0.242	0.558	4.32	-0.198	2.38	
1/25/2013	10:02:00	14.901	14.678	0.223	0.514	4.32	-0.154	1.85	
1/25/2013	10:17:00	14.899	14.655	0.244	0.563	4.32	-0.203	2.43	
1/25/2013	10:32:00	14.885	14.664	0.221	0.510	4.32	-0.150	1.80	
1/25/2013	10:47:00	14.884	14.655	0.229	0.528	4.32	-0.168	2.02	
1/25/2013	11:02:00	14.889	14.659	0.230	0.531	4.32	-0.171	2.05	
1/25/2013	11:17:00	14.879	14.645	0.234	0.540	4.32	-0.180	2.16	
1/25/2013	11:32:00	14.881	14.638	0.243	0.561	4.32	-0.201	2.41	
1/25/2013	11:47:00	14.867	14.621	0.246	0.568	4.32	-0.208	2.49	
1/25/2013	12:02:00	14.863	14.631	0.232	0.535	4.32	-0.175	2.10	
1/25/2013	12:17:00	14.852	14.619	0.233	0.538	4.32	-0.178	2.13	
1/25/2013	12:32:00	14.838	14.601	0.237	0.547	4.32	-0.187	2.24	
1/25/2013	12:47:00	14.836	14.593	0.243	0.561	4.32	-0.201	2.41	
1/25/2013	13:02:00	14.832	14.584	0.248	0.572	4.32	-0.212	2.55	
1/25/2013	13:17:00	14.817	14.584	0.233	0.538	4.32	-0.178	2.13	
1/25/2013	13:32:00	14.821	14.576	0.245	0.565	4.32	-0.205	2.46	
1/25/2013	13:47:00	14.809	14.577	0.232	0.535	4.32	-0.175	2.10	
1/25/2013	14:02:00	14.811	14.578	0.233	0.538	4.32	-0.178	2.13	
1/25/2013	14:17:00	14.807	14.574	0.233	0.538	4.32	-0.178	2.13	
1/25/2013	14:32:00	14.812	14.570	0.242	0.558	4.32	-0.198	2.38	
1/25/2013	14:47:00	14.802	14.574	0.228	0.526	4.32	-0.166	1.99	
1/25/2013	15:02:00	14.817	14.577	0.240	0.554	4.32	-0.194	2.32	
1/25/2013	15:17:00	14.811	14.575	0.236	0.544	4.32	-0.184	2.21	
1/25/2013	15:32:00	14.811	14.567	0.244	0.563	4.32	-0.203	2.43	
1/25/2013	15:47:00	14.808	14.562	0.246	0.568	4.32	-0.208	2.49	
1/25/2013	16:02:00	14.805	14.553	0.252	0.581	4.32	-0.221	2.66	
1/25/2013	16:17:00	14.799	14.547	0.252	0.581	4.32	-0.221	2.66	
1/25/2013	16:32:00	14.781	14.543	0.238	0.549	4.32	-0.189	2.27	
1/25/2013	16:47:00	14.778	14.539	0.239	0.551	4.32	-0.191	2.30	
1/25/2013	17:02:00	14.792	14.549	0.243	0.561	4.32	-0.201	2.41	
1/25/2013	17:17:00	14.785	14.543	0.242	0.558	4.32	-0.198	2.38	
1/25/2013	17:32:00	14.782	14.542	0.240	0.554	4.32	-0.194	2.32	
1/25/2013	17:47:00	14.781	14.535	0.246	0.568	4.32	-0.208	2.49	
1/25/2013	18:02:00	14.789	14.541	0.248	0.572	4.32	-0.212	2.55	
1/25/2013	18:17:00	14.784	14.538	0.246	0.568	4.32	-0.208	2.49	
1/25/2013	18:32:00	14.782	14.530	0.252	0.581	4.32	-0.221	2.66	
1/25/2013	18:47:00	14.786	14.535	0.251	0.579	4.32	-0.219	2.63	
1/25/2013	19:02:00	14.778	14.536	0.242	0.558	4.32	-0.198	2.38	
1/25/2013	19:17:00	14.775	14.534	0.241	0.556	4.32	-0.196	2.35	
1/25/2013	19:32:00	14.772	14.535	0.237	0.547	4.32	-0.187	2.24	
1/25/2013	19:47:00	14.774	14.537	0.237	0.547	4.32	-0.187	2.24	
1/25/2013	20:02:00	14.779	14.538	0.241	0.556	4.32	-0.196	2.35	
1/25/2013	20:17:00	14.779	14.533	0.246	0.568	4.32	-0.208	2.49	
1/25/2013	20:32:00	14.772	14.536	0.236	0.544	4.32	-0.184	2.21	
1/25/2013	20:47:00	14.775	14.531	0.244	0.563	4.32	-0.203	2.43	
1/25/2013	21:02:00	14.771	14.538	0.233	0.538	4.32	-0.178	2.13	
1/25/2013	21:17:00	14.770	14.538	0.232	0.535	4.32	-0.175	2.10	
1/25/2013	21:32:00	14.765	14.533	0.232	0.535	4.32	-0.175	2.10	
1/25/2013	21:47:00	14.774	14.534	0.240	0.554	4.32	-0.194	2.32	
1/25/2013	22:02:00	14.763	14.529	0.234	0.540	4.32	-0.180	2.16	
1/25/2013	22:17:00	14.764	14.529	0.235	0.542	4.32	-0.182	2.19	
1/25/2013	22:32:00	14.766	14.529	0.237	0.547	4.32	-0.187	2.24	
1/25/2013	22:47:00	14.761	14.526	0.235	0.542	4.32	-0.182	2.19	
1/25/2013	23:02:00	14.760	14.527	0.233	0.538	4.32	-0.178	2.13	
1/25/2013	23:17:00	14.759	14.529	0.230	0.531	4.32	-0.171	2.05	
1/25/2013	23:32:00	14.760	14.522	0.238	0.549	4.32	-0.189	2.27	
1/25/2013	23:47:00	14.758	14.527	0.231	0.533	4.32	-0.173	2.08	
1/26/2013	0:02:00	14.754	14.521	0.233	0.538	4.32	-0.178	2.13	
1/26/2013	0:17:00	14.753	14.523	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	0:32:00	14.752	14.522	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	0:47:00	14.752	14.518	0.234	0.540	4.32	-0.180	2.16	
1/26/2013	1:02:00	14.746	14.516	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	1:17:00	14.752	14.519	0.233	0.538	4.32	-0.178	2.13	
1/26/2013	1:32:00	14.753	14.517	0.236	0.544	4.32	-0.184	2.21	
1/26/2013	1:47:00	14.749	14.521	0.228	0.526	4.32	-0.166	1.99	
1/26/2013	2:02:00	14.746	14.523	0.223	0.514	4.32	-0.154	1.85	
1/26/2013	2:17:00	14.743	14.511	0.232	0.535	4.32	-0.175	2.10	
1/26/2013	2:32:00	14.740	14.514	0.226	0.521	4.32	-0.161	1.94	
1/26/2013	2:47:00	14.749	14.519	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	3:02:00	14.748	14.515	0.233	0.538	4.32	-0.178	2.13	
1/26/2013	3:17:00	14.740	14.509	0.231	0.533	4.32	-0.173	2.08	
1/26/2013	3:32:00	14.739	14.514	0.225	0.519	4.32	-0.159	1.91	
1/26/2013	3:47:00	14.743	14.509	0.234	0.540	4.32	-0.180	2.16	
1/26/2013	4:02:00	14.740	14.510	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	4:17:00	14.744	14.516	0.228	0.526	4.32	-0.166	1.99	
1/26/2013	4:32:00	14.748	14.512	0.236	0.544	4.32	-0.184	2.21	
1/26/2013	4:47:00	14.748	14.518	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	5:02:00	14.752	14.516	0.236	0.544	4.32	-0.184	2.21	
1/26/2013	5:17:00	14.743	14.517	0.226	0.521	4.32	-0.161	1.94	
1/26/2013	5:32:00	14.753	14.515	0.238	0.549	4.32	-0.189	2.27	
1/26/2013	5:47:00	14.744	14.507	0.237	0.547	4.32	-0.187	2.24	
1/26/2013	6:02:00	14.742	14.513	0.229	0.528	4.32	-0.168	2.02	
1/26/2013	6:17:00	14.748	14.517	0.231	0.533	4.32	-0.173	2.08	
1/26/2013	6:32:00	14.750	14.524	0.226	0.521	4.32	-0.161	1.94	
1/26/2013	6:47:00	14.754	14.525	0.229	0.528	4.32	-0.168	2.02	
1/26/2013	7:02:00	14.761	14.538	0.223	0.514	4.32	-0.154	1.85	
1/26/2013	7:17:00	14.772	14.542	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	7:32:00	14.769	14.543	0.226	0.521	4.32	-0.161	1.94	
1/26/2013	7:47:00	14.776	14.549	0.227	0.524	4.32	-0.164	1.96	
1/26/2013	8:02:00	14.779	14.553	0.226	0.521	4.32	-0.161	1.94	
1/26/2013	8:17:00	14.782	14.551	0.231	0.533	4.32	-0.173	2.08	
1/26/2013	8:32:00	14.791	14.558	0.233	0.538	4.32	-0.178	2.13	
1/26/2013	8:47:00	14.784	14.560	0.224	0.517	4.32	-0.157	1.88	
1/26/2013	9:02:00	14.792	14.562	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	9:17:00	14.795	14.561	0.234	0.540	4.32	-0.180	2.16	
1/26/2013	9:32:00	14.794	14.566	0.228	0.526	4.32	-0.166	1.99	
1/26/2013	9:47:00	14.798	14.566	0.232	0.535	4.32	-0.175	2.10	
1/26/2013	10:02:00	14.801	14.571	0.230	0.531	4.32	-0.171	2.05	
1/26/2013	10:17:00	14.805	14.573	0.232	0.535	4.32	-0.175	2.10	0.02
1/26/2013	10:32:00	14.810	14.576	0.234	0.540	4.32	-0.180	2.16	0.04
1/26/2013	10:47:00	14.810	14.568	0.242	0.558	4.32	-0.198	2.38	0.06
1/26/2013	11:02:00	14.810	14.574	0.236	0.544	4.32	-0.184	2.21	0.08
1/26/2013	11:17:00	14.816	14.577	0.239	0.551	4.32	-0.191	2.30	
1/26/2013	11:32:00	14.818	14.579	0.239	0.551	4.32	-0.191	2.30	
1/26/2013	11:47:00	14.818	14.581	0.237	0.547	4.32	-0.187	2.24	
1/26/2013	12:02:00	14.820	14.579	0.241	0.556	4.32	-0.196	2.35	
1/26/2013	12:17:00	14.815	14.577	0.238	0.549	4.32	-0.189	2.27	
1/26/2013	12:32:00	14.821	14.573	0.248	0.572	4.32	-0.212	2.55	
1/26/2013	12:47:00	14.818	14.570	0.248	0.572	4.32	-0.212	2.55	
1/26/2013	13:02:00	14.818	14.567	0.251	0.579	4.32	-0.219	2.63	
1/26/2013	13:17:00	14.816	14.564	0.252	0.581	4.32	-0.221	2.66	
1/26/2013	13:32:00	14.818	14.561	0.257	0.593	4.32	-0.233	2.79	
1/26/2013	13:47:00	14.821	14.563	0.258	0.595	4.32	-0.235	2.82	
1/26/2013	14:02:00	14.820	14.559	0.261	0.602	4.32	-0.242	2.91	
1/26/2013	14:17:00	14.815	14.558	0.257	0.593	4.32	-0.233	2.79	
1/26/2013	14:32:00	14.821	14.563	0.258	0.595	4.32	-0.235	2.82	
1/26/2013	14:47:00	14.815	14.561	0.254	0.586	4.32	-0.226	2.71	
1/26/2013	15:02:00	14.816	14.562	0.254	0.586	4.32	-0.226	2.71	
1/26/2013	15:17:00	14.821	14.567	0.254	0.586	4.32	-0.226	2.71	
1/26/2013	15:32:00	14.823	14.570	0.253	0.584	4.32	-0.224	2.68	
1/26/2013	15:47:00	14.813	14.564	0.249	0.574	4.32	-0.214	2.57	
1/26/2013	16:02:00	14.831	14.568	0.263	0.607	4.32	-0.247	2.96	

1/26/2013	16:17:00	14.822	14.568	0.254	0.586	4.32	-0.226	2.71
1/26/2013	16:32:00	14.821	14.575	0.246	0.568	4.32	-0.208	2.49
1/26/2013	16:47:00	14.823	14.574	0.249	0.574	4.32	-0.214	2.57
1/26/2013	17:02:00	14.821	14.573	0.248	0.572	4.32	-0.212	2.55
1/26/2013	17:17:00	14.820	14.578	0.242	0.558	4.32	-0.198	2.38
1/26/2013	17:32:00	14.824	14.576	0.248	0.572	4.32	-0.212	2.55
1/26/2013	17:47:00	14.821	14.569	0.252	0.581	4.32	-0.221	2.66
1/26/2013	18:02:00	14.828	14.588	0.240	0.554	4.32	-0.194	2.32
1/26/2013	18:17:00	14.833	14.588	0.245	0.565	4.32	-0.205	2.46
1/26/2013	18:32:00	14.831	14.586	0.245	0.565	4.32	-0.205	2.46
1/26/2013	18:47:00	14.830	14.593	0.237	0.547	4.32	-0.187	2.24
1/26/2013	19:02:00	14.834	14.594	0.240	0.554	4.32	-0.194	2.32
1/26/2013	19:17:00	14.833	14.594	0.239	0.551	4.32	-0.191	2.30
1/26/2013	19:32:00	14.834	14.592	0.242	0.558	4.32	-0.198	2.38
1/26/2013	19:47:00	14.839	14.598	0.241	0.556	4.32	-0.196	2.35
1/26/2013	20:02:00	14.843	14.599	0.244	0.563	4.32	-0.203	2.43
1/26/2013	20:17:00	14.840	14.602	0.238	0.549	4.32	-0.189	2.27
1/26/2013	20:32:00	14.841	14.604	0.237	0.547	4.32	-0.187	2.24
1/26/2013	20:47:00	14.845	14.603	0.242	0.558	4.32	-0.198	2.38
1/26/2013	21:02:00	14.846	14.609	0.237	0.547	4.32	-0.187	2.24
1/26/2013	21:17:00	14.846	14.607	0.239	0.551	4.32	-0.191	2.30
1/26/2013	21:32:00	14.850	14.611	0.239	0.551	4.32	-0.191	2.30
1/26/2013	21:47:00	14.851	14.616	0.235	0.542	4.32	-0.182	2.19
1/26/2013	22:02:00	14.853	14.622	0.231	0.533	4.32	-0.173	2.08
1/26/2013	22:17:00	14.858	14.621	0.237	0.547	4.32	-0.187	2.24
1/26/2013	22:32:00	14.862	14.626	0.236	0.544	4.32	-0.184	2.21
1/26/2013	22:47:00	14.856	14.627	0.229	0.528	4.32	-0.168	2.02
1/26/2013	23:02:00	14.866	14.631	0.235	0.542	4.32	-0.182	2.19
1/26/2013	23:17:00	14.864	14.631	0.233	0.538	4.32	-0.178	2.13
1/26/2013	23:32:00	14.867	14.639	0.228	0.526	4.32	-0.166	1.99
1/26/2013	23:47:00	14.872	14.633	0.239	0.551	4.32	-0.191	2.30
1/27/2013	0:02:00	14.871	14.637	0.234	0.540	4.32	-0.180	2.16
1/27/2013	0:17:00	14.870	14.644	0.226	0.521	4.32	-0.161	1.94
1/27/2013	0:32:00	14.877	14.645	0.232	0.535	4.32	-0.175	2.10
1/27/2013	0:47:00	14.880	14.643	0.237	0.547	4.32	-0.187	2.24
1/27/2013	1:02:00	14.878	14.646	0.232	0.535	4.32	-0.175	2.10
1/27/2013	1:17:00	14.877	14.646	0.231	0.533	4.32	-0.173	2.08
1/27/2013	1:32:00	14.877	14.653	0.224	0.517	4.32	-0.157	1.88
1/27/2013	1:47:00	14.880	14.655	0.225	0.519	4.32	-0.159	1.91
1/27/2013	2:02:00	14.886	14.661	0.225	0.519	4.32	-0.159	1.91
1/27/2013	2:17:00	14.888	14.659	0.229	0.528	4.32	-0.168	2.02
1/27/2013	2:32:00	14.886	14.664	0.222	0.512	4.32	-0.152	1.83
1/27/2013	2:47:00	14.895	14.664	0.231	0.533	4.32	-0.173	2.08
1/27/2013	3:02:00	14.897	14.669	0.228	0.526	4.32	-0.166	1.99
1/27/2013	3:17:00	14.901	14.667	0.234	0.540	4.32	-0.180	2.16
1/27/2013	3:32:00	14.894	14.670	0.224	0.517	4.32	-0.157	1.88
1/27/2013	3:47:00	14.898	14.670	0.228	0.526	4.32	-0.166	1.99
1/27/2013	4:02:00	14.898	14.668	0.230	0.531	4.32	-0.171	2.05
1/27/2013	4:17:00	14.897	14.663	0.234	0.540	4.32	-0.180	2.16
1/27/2013	4:32:00	14.900	14.670	0.230	0.531	4.32	-0.171	2.05
1/27/2013	4:47:00	14.899	14.673	0.226	0.521	4.32	-0.161	1.94
1/27/2013	5:02:00	14.898	14.673	0.225	0.519	4.32	-0.159	1.91
1/27/2013	5:17:00	14.899	14.672	0.227	0.524	4.32	-0.164	1.96
1/27/2013	5:32:00	14.902	14.675	0.227	0.524	4.32	-0.164	1.96
1/27/2013	5:47:00	14.911	14.680	0.231	0.533	4.32	-0.173	2.08
1/27/2013	6:02:00	14.910	14.685	0.225	0.519	4.32	-0.159	1.91
1/27/2013	6:17:00	14.913	14.688	0.225	0.519	4.32	-0.159	1.91
1/27/2013	6:32:00	14.918	14.692	0.226	0.521	4.32	-0.161	1.94
1/27/2013	6:47:00	14.923	14.689	0.234	0.540	4.32	-0.180	2.16
1/27/2013	7:02:00	14.923	14.695	0.228	0.526	4.32	-0.166	1.99
1/27/2013	7:17:00	14.924	14.694	0.230	0.531	4.32	-0.171	2.05
1/27/2013	7:32:00	14.928	14.701	0.227	0.524	4.32	-0.164	1.96
1/27/2013	7:47:00	14.932	14.706	0.226	0.521	4.32	-0.161	1.94
1/27/2013	8:02:00	14.938	14.700	0.238	0.549	4.32	-0.189	2.27
1/27/2013	8:17:00	14.936	14.720	0.216	0.498	4.32	-0.138	1.66
1/27/2013	8:32:00	14.941	14.718	0.223	0.514	4.32	-0.154	1.85
1/27/2013	8:47:00	14.945	14.721	0.224	0.517	4.32	-0.157	1.88
1/27/2013	9:02:00	14.951	14.718	0.233	0.538	4.32	-0.178	2.13
1/27/2013	9:17:00	14.957	14.722	0.235	0.542	4.32	-0.182	2.19
1/27/2013	9:32:00	14.954	14.729	0.225	0.519	4.32	-0.159	1.91
1/27/2013	9:47:00	14.953	14.723	0.230	0.531	4.32	-0.171	2.05
1/27/2013	10:02:00	14.959	14.730	0.229	0.528	4.32	-0.168	2.02
1/27/2013	10:17:00	14.955	14.727	0.228	0.526	4.32	-0.166	1.99
1/27/2013	10:32:00	14.966	14.731	0.235	0.542	4.32	-0.182	2.19
1/27/2013	10:47:00	14.960	14.735	0.225	0.519	4.32	-0.159	1.91
1/27/2013	11:02:00	14.972	14.731	0.241	0.556	4.32	-0.196	2.35
1/27/2013	11:17:00	14.967	14.723	0.244	0.563	4.32	-0.203	2.43
1/27/2013	11:32:00	14.963	14.726	0.237	0.547	4.32	-0.187	2.24
1/27/2013	11:47:00	14.961	14.722	0.239	0.551	4.32	-0.191	2.30
1/27/2013	12:02:00	14.958	14.707	0.251	0.579	4.32	-0.219	2.63
1/27/2013	12:17:00	14.950	14.717	0.233	0.538	4.32	-0.178	2.13
1/27/2013	12:32:00	14.953	14.721	0.232	0.535	4.32	-0.175	2.10
1/27/2013	12:47:00	14.960	14.713	0.247	0.570	4.32	-0.210	2.52
1/27/2013	13:02:00	14.957	14.711	0.246	0.568	4.32	-0.208	2.49
1/27/2013	13:17:00	14.947	14.703	0.244	0.563	4.32	-0.203	2.43
1/27/2013	13:32:00	14.941	14.704	0.237	0.547	4.32	-0.187	2.24
1/27/2013	13:47:00	14.940	14.700	0.240	0.554	4.32	-0.194	2.32
1/27/2013	14:02:00	14.940	14.704	0.236	0.544	4.32	-0.184	2.21
1/27/2013	14:17:00	14.939	14.705	0.234	0.540	4.32	-0.180	2.16
1/27/2013	14:32:00	14.944	14.691	0.253	0.584	4.32	-0.224	2.68
1/27/2013	14:47:00	14.933	14.694	0.239	0.551	4.32	-0.191	2.30
1/27/2013	15:02:00	14.934	14.696	0.238	0.549	4.32	-0.189	2.27
1/27/2013	15:17:00	14.931	14.688	0.243	0.561	4.32	-0.201	2.41
1/27/2013	15:32:00	14.929	14.685	0.244	0.563	4.32	-0.203	2.43
1/27/2013	15:47:00	14.928	14.690	0.238	0.549	4.32	-0.189	2.27
1/27/2013	16:02:00	14.928	14.694	0.234	0.540	4.32	-0.180	2.16
1/27/2013	16:17:00	14.926	14.692	0.234	0.540	4.32	-0.180	2.16
1/27/2013	16:32:00	14.930	14.685	0.245	0.565	4.32	-0.205	2.46
1/27/2013	16:47:00	14.928	14.695	0.233	0.538	4.32	-0.178	2.13
1/27/2013	17:02:00	14.935	14.702	0.233	0.538	4.32	-0.178	2.13
1/27/2013	17:17:00	14.934	14.698	0.236	0.544	4.32	-0.184	2.21
1/27/2013	17:32:00	14.932	14.700	0.232	0.535	4.32	-0.175	2.10
1/27/2013	17:47:00	14.932	14.700	0.232	0.535	4.32	-0.175	2.10
1/27/2013	18:02:00	14.932	14.695	0.237	0.547	4.32	-0.187	2.24
1/27/2013	18:17:00	14.933	14.708	0.225	0.519	4.32	-0.159	1.91
1/27/2013	18:32:00	14.939	14.723	0.216	0.498	4.32	-0.138	1.66
1/27/2013	18:47:00	14.942	14.706	0.236	0.544	4.32	-0.184	2.21
1/27/2013	19:02:00	14.944	14.709	0.235	0.542	4.32	-0.182	2.19
1/27/2013	19:17:00	14.936	14.702	0.234	0.540	4.32	-0.180	2.16
1/27/2013	19:32:00	14.937	14.704	0.233	0.538	4.32	-0.178	2.13
1/27/2013	19:47:00	14.940	14.705	0.235	0.542	4.32	-0.182	2.19
1/27/2013	20:02:00	14.941	14.703	0.238	0.549	4.32	-0.189	2.27
1/27/2013	20:17:00	14.938	14.705	0.233	0.538	4.32	-0.178	2.13
1/27/2013	20:32:00	14.938	14.708	0.230	0.531	4.32	-0.171	2.05
1/27/2013	20:47:00	14.941	14.705	0.236	0.544	4.32	-0.184	2.21
1/27/2013	21:02:00	14.938	14.709	0.229	0.528	4.32	-0.168	2.02
1/27/2013	21:17:00	14.938	14.700	0.238	0.549	4.32	-0.189	2.27
1/27/2013	21:32:00	14.936	14.710	0.226	0.521	4.32	-0.161	1.94
1/27/2013	21:47:00	14.935	14.711	0.224	0.517	4.32	-0.157	1.88
1/27/2013	22:02:00	14.937	14.693	0.244	0.563	4.32	-0.203	2.43
1/27/2013	22:17:00	14.939	14.696	0.243	0.561	4.32	-0.201	2.41
1/27/2013	22:32:00	14.932	14.696	0.236	0.544	4.32	-0.184	2.21
1/27/2013	22:47:00	14.935	14.701	0.234	0.540	4.32	-0.180	2.16
1/27/2013	23:02:00	14.934	14.689	0.245	0.565	4.32	-0.205	2.46
1/27/2013	23:17:00	14.932	14.684	0.248	0.572	4.32	-0.212	2.55
1/27/2013	23:32:00	14.932	14.690	0.242	0.558	4.32	-0.198	2.38
1/27/2013	23:47:00	14.927	14.690	0.237	0.547	4.32	-0.187	2.24
1/28/2013	0:02:00	14.923	14.691	0.232	0.535	4.32	-0.175	2.10
1/28/2013	0:17:00	14.923	14.694	0.229	0.528	4.32	-0.168	2.02
1/28/2013	0:32:00	14.933	14.692	0.241	0.556	4.32	-0.196	2.35
1/28/2013	0:47:00	14.923	14.689	0.234	0.540	4.32	-0.180	2.16
1/28/2013	1:02:00	14.919	14.690	0.229	0.528	4.32	-0.168	2.02
1/28/2013	1:17:00	14.916	14.682	0.234	0.540	4.32	-0.180	2.16

1/28/2013	1:32:00	14.918	14.683	0.235	0.542	4.32	-0.182	2.19
1/28/2013	1:47:00	14.915	14.683	0.232	0.535	4.32	-0.175	2.10
1/28/2013	2:02:00	14.921	14.686	0.235	0.542	4.32	-0.182	2.19
1/28/2013	2:17:00	14.916	14.682	0.234	0.540	4.32	-0.180	2.16
1/28/2013	2:32:00	14.916	14.681	0.235	0.542	4.32	-0.182	2.19
1/28/2013	2:47:00	14.922	14.687	0.235	0.542	4.32	-0.182	2.19
1/28/2013	3:02:00	14.919	14.676	0.243	0.561	4.32	-0.201	2.41
1/28/2013	3:17:00	14.917	14.678	0.239	0.551	4.32	-0.191	2.30
1/28/2013	3:32:00	14.916	14.685	0.231	0.533	4.32	-0.173	2.08
1/28/2013	3:47:00	14.909	14.675	0.234	0.540	4.32	-0.180	2.16
1/28/2013	4:02:00	14.914	14.676	0.238	0.549	4.32	-0.189	2.27
1/28/2013	4:17:00	14.912	14.680	0.232	0.535	4.32	-0.175	2.10
1/28/2013	4:32:00	14.911	14.671	0.240	0.554	4.32	-0.194	2.32
1/28/2013	4:47:00	14.903	14.675	0.228	0.526	4.32	-0.166	1.99
1/28/2013	5:02:00	14.909	14.672	0.237	0.547	4.32	-0.187	2.24
1/28/2013	5:17:00	14.905	14.681	0.224	0.517	4.32	-0.157	1.88
1/28/2013	5:32:00	14.912	14.676	0.236	0.544	4.32	-0.184	2.21
1/28/2013	5:47:00	14.910	14.682	0.228	0.526	4.32	-0.166	1.99
1/28/2013	6:02:00	14.920	14.683	0.237	0.547	4.32	-0.187	2.24
1/28/2013	6:17:00	14.910	14.679	0.231	0.533	4.32	-0.173	2.08
1/28/2013	6:32:00	14.916	14.679	0.237	0.547	4.32	-0.187	2.24
1/28/2013	6:47:00	14.912	14.680	0.232	0.535	4.32	-0.175	2.10
1/28/2013	7:02:00	14.912	14.690	0.222	0.512	4.32	-0.152	1.83
1/28/2013	7:17:00	14.916	14.686	0.230	0.531	4.32	-0.171	2.05
1/28/2013	7:32:00	14.919	14.687	0.232	0.535	4.32	-0.175	2.10
1/28/2013	7:47:00	14.920	14.693	0.227	0.524	4.32	-0.164	1.96
1/28/2013	8:02:00	14.918	14.684	0.234	0.540	4.32	-0.180	2.16
1/28/2013	8:17:00	14.916	14.679	0.237	0.547	4.32	-0.187	2.24
1/28/2013	8:32:00	14.913	14.683	0.230	0.531	4.32	-0.171	2.05
1/28/2013	8:47:00	14.909	14.673	0.236	0.544	4.32	-0.184	2.21
1/28/2013	9:02:00	14.909	14.670	0.239	0.551	4.32	-0.191	2.30
1/28/2013	9:17:00	14.915	14.679	0.236	0.544	4.32	-0.184	2.21
1/28/2013	9:32:00	14.912	14.680	0.232	0.535	4.32	-0.175	2.10
1/28/2013	9:47:00	14.910	14.672	0.238	0.549	4.32	-0.189	2.27
1/28/2013	10:02:00	14.906	14.677	0.229	0.528	4.32	-0.168	2.02
1/28/2013	10:17:00	14.911	14.676	0.235	0.542	4.32	-0.182	2.19
1/28/2013	10:32:00	14.907	14.672	0.235	0.542	4.32	-0.182	2.19
1/28/2013	10:47:00	14.909	14.670	0.239	0.551	4.32	-0.191	2.30
1/28/2013	11:02:00	14.903	14.665	0.238	0.549	4.32	-0.189	2.27
1/28/2013	11:17:00	14.901	14.667	0.234	0.540	4.32	-0.180	2.16
1/28/2013	11:32:00	14.900	14.664	0.236	0.544	4.32	-0.184	2.21
1/28/2013	11:47:00	14.895	14.658	0.237	0.547	4.32	-0.187	2.24
1/28/2013	12:02:00	14.889	14.653	0.236	0.544	4.32	-0.184	2.21
1/28/2013	12:17:00	14.883	14.645	0.238	0.549	4.32	-0.189	2.27
1/28/2013	12:32:00	14.876	14.641	0.235	0.542	4.32	-0.182	2.19
1/28/2013	12:47:00	14.873	14.636	0.237	0.547	4.32	-0.187	2.24
1/28/2013	13:02:00	14.867	14.631	0.236	0.544	4.32	-0.184	2.21
1/28/2013	13:17:00	14.864	14.626	0.238	0.549	4.32	-0.189	2.27
1/28/2013	13:32:00	14.859	14.620	0.239	0.551	4.32	-0.191	2.30
1/28/2013	13:47:00	14.858	14.615	0.243	0.561	4.32	-0.201	2.41
1/28/2013	14:02:00	14.859	14.615	0.244	0.563	4.32	-0.203	2.43
1/28/2013	14:17:00	14.851	14.609	0.242	0.558	4.32	-0.198	2.38
1/28/2013	14:32:00	14.848	14.612	0.236	0.544	4.32	-0.184	2.21
1/28/2013	14:47:00	14.852	14.607	0.245	0.565	4.32	-0.205	2.46
1/28/2013	15:02:00	14.842	14.611	0.231	0.533	4.32	-0.173	2.08
1/28/2013	15:17:00	14.841	14.606	0.235	0.542	4.32	-0.182	2.19
1/28/2013	15:32:00	14.844	14.600	0.244	0.563	4.32	-0.203	2.43
1/28/2013	15:47:00	14.839	14.598	0.241	0.556	4.32	-0.196	2.35
1/28/2013	16:02:00	14.831	14.598	0.233	0.538	4.32	-0.178	2.13
1/28/2013	16:17:00	14.834	14.600	0.234	0.540	4.32	-0.180	2.16
1/28/2013	16:32:00	14.837	14.595	0.242	0.558	4.32	-0.198	2.38
1/28/2013	16:47:00	14.833	14.600	0.233	0.538	4.32	-0.178	2.13
1/28/2013	17:02:00	14.837	14.594	0.243	0.561	4.32	-0.201	2.41
1/28/2013	17:17:00	14.830	14.594	0.236	0.544	4.32	-0.184	2.21
1/28/2013	17:32:00	14.838	14.595	0.243	0.561	4.32	-0.201	2.41
1/28/2013	17:47:00	14.832	14.600	0.232	0.535	4.32	-0.175	2.10
1/28/2013	18:02:00	14.835	14.598	0.237	0.547	4.32	-0.187	2.24
1/28/2013	18:17:00	14.833	14.597	0.236	0.544	4.32	-0.184	2.21
1/28/2013	18:32:00	14.838	14.603	0.235	0.542	4.32	-0.182	2.19
1/28/2013	18:47:00	14.832	14.599	0.233	0.538	4.32	-0.178	2.13
1/28/2013	19:02:00	14.835	14.595	0.240	0.554	4.32	-0.194	2.32
1/28/2013	19:17:00	14.836	14.599	0.237	0.547	4.32	-0.187	2.24
1/28/2013	19:32:00	14.832	14.598	0.234	0.540	4.32	-0.180	2.16
1/28/2013	19:47:00	14.829	14.592	0.237	0.547	4.32	-0.187	2.24
1/28/2013	20:02:00	14.831	14.592	0.239	0.551	4.32	-0.191	2.30
1/28/2013	20:17:00	14.831	14.598	0.233	0.538	4.32	-0.178	2.13
1/28/2013	20:32:00	14.828	14.593	0.235	0.542	4.32	-0.182	2.19
1/28/2013	20:47:00	14.830	14.587	0.243	0.561	4.32	-0.201	2.41
1/28/2013	21:02:00	14.834	14.594	0.240	0.554	4.32	-0.194	2.32
1/28/2013	21:17:00	14.828	14.593	0.235	0.542	4.32	-0.182	2.19
1/28/2013	21:32:00	14.832	14.594	0.238	0.549	4.32	-0.189	2.27
1/28/2013	21:47:00	14.829	14.585	0.244	0.563	4.32	-0.203	2.43
1/28/2013	22:02:00	14.828	14.586	0.242	0.558	4.32	-0.198	2.38
1/28/2013	22:17:00	14.826	14.585	0.241	0.556	4.32	-0.196	2.35
1/28/2013	22:32:00	14.822	14.587	0.235	0.542	4.32	-0.182	2.19
1/28/2013	22:47:00	14.827	14.581	0.246	0.568	4.32	-0.208	2.49
1/28/2013	23:02:00	14.825	14.582	0.243	0.561	4.32	-0.201	2.41
1/28/2013	23:17:00	14.828	14.587	0.241	0.556	4.32	-0.196	2.35
1/28/2013	23:32:00	14.822	14.585	0.237	0.547	4.32	-0.187	2.24
1/28/2013	23:47:00	14.820	14.585	0.235	0.542	4.32	-0.182	2.19
1/29/2013	0:02:00	14.820	14.585	0.235	0.542	4.32	-0.182	2.19
1/29/2013	0:17:00	14.817	14.578	0.239	0.551	4.32	-0.191	2.30
1/29/2013	0:32:00	14.816	14.576	0.240	0.554	4.32	-0.194	2.32
1/29/2013	0:47:00	14.811	14.572	0.239	0.551	4.32	-0.191	2.30
1/29/2013	1:02:00	14.808	14.570	0.238	0.549	4.32	-0.189	2.27
1/29/2013	1:17:00	14.811	14.568	0.243	0.561	4.32	-0.201	2.41
1/29/2013	1:32:00	14.806	14.568	0.238	0.549	4.32	-0.189	2.27
1/29/2013	1:47:00	14.804	14.572	0.232	0.535	4.32	-0.175	2.10
1/29/2013	2:02:00	14.805	14.570	0.235	0.542	4.32	-0.182	2.19
1/29/2013	2:17:00	14.810	14.574	0.236	0.544	4.32	-0.184	2.21
1/29/2013	2:32:00	14.807	14.568	0.239	0.551	4.32	-0.191	2.30
1/29/2013	2:47:00	14.807	14.571	0.236	0.544	4.32	-0.184	2.21
1/29/2013	3:02:00	14.804	14.568	0.236	0.544	4.32	-0.184	2.21
1/29/2013	3:17:00	14.805	14.564	0.241	0.556	4.32	-0.196	2.35
1/29/2013	3:32:00	14.808	14.553	0.255	0.588	4.32	-0.228	2.74
1/29/2013	3:47:00	14.806	14.566	0.240	0.554	4.32	-0.194	2.32
1/29/2013	4:02:00	14.802	14.570	0.232	0.535	4.32	-0.175	2.10
1/29/2013	4:17:00	14.795	14.562	0.233	0.538	4.32	-0.178	2.13
1/29/2013	4:32:00	14.799	14.562	0.237	0.547	4.32	-0.187	2.24
1/29/2013	4:47:00	14.801	14.569	0.232	0.535	4.32	-0.175	2.10
1/29/2013	5:02:00	14.799	14.559	0.240	0.554	4.32	-0.194	2.32
1/29/2013	5:17:00	14.796	14.562	0.234	0.540	4.32	-0.180	2.16
1/29/2013	5:32:00	14.798	14.565	0.233	0.538	4.32	-0.178	2.13
1/29/2013	5:47:00	14.799	14.564	0.235	0.542	4.32	-0.182	2.19
1/29/2013	6:02:00	14.807	14.564	0.243	0.561	4.32	-0.201	2.41
1/29/2013	6:17:00	14.802	14.561	0.241	0.556	4.32	-0.196	2.35
1/29/2013	6:32:00	14.797	14.567	0.230	0.531	4.32	-0.171	2.05
1/29/2013	6:47:00	14.802	14.562	0.240	0.554	4.32	-0.194	2.32
1/29/2013	7:02:00	14.798	14.561	0.237	0.547	4.32	-0.187	2.24
1/29/2013	7:17:00	14.804	14.566	0.238	0.549	4.32	-0.189	2.27
1/29/2013	7:32:00	14.804	14.562	0.242	0.558	4.32	-0.198	2.38
1/29/2013	7:47:00	14.802	14.569	0.233	0.538	4.32	-0.178	2.13
1/29/2013	8:02:00	14.805	14.567	0.238	0.549	4.32	-0.189	2.27
1/29/2013	8:17:00	14.807	14.567	0.240	0.554	4.32	-0.194	2.32
1/29/2013	8:32:00	14.805	14.576	0.229	0.528	4.32	-0.168	2.02
1/29/2013	8:47:00	14.802	14.565	0.237	0.547	4.32	-0.187	2.24
1/29/2013	9:02:00	14.805	14.575	0.230	0.531	4.32	-0.171	2.05
1/29/2013	9:17:00	14.804	14.566	0.238	0.549	4.32	-0.189	2.27
1/29/2013	9:32:00	14.802	14.569	0.233	0.538	4.32	-0.178	2.13
1/29/2013	9:47:00	14.799	14.563	0.236	0.544	4.32	-0.184	2.21
1/29/2013	10:02:00	14.796	14.567	0.229	0.528	4.32	-0.168	2.02
1/29/2013	10:17:00	14.797	14.567	0.230	0.531	4.32	-0.171	2.05
1/29/2013	10:32:00	14.799	14.566	0.233	0.538	4.32	-0.178	2.13

1/29/2013	10:47:00	14.799	14.563	0.236	0.544	4.32	-0.184	2.21
1/29/2013	11:02:00	14.798	14.558	0.240	0.554	4.32	-0.194	2.32
1/29/2013	11:17:00	14.800	14.560	0.240	0.554	4.32	-0.194	2.32
1/29/2013	11:32:00	14.792	14.554	0.238	0.549	4.32	-0.189	2.27
1/29/2013	11:47:00	14.792	14.551	0.241	0.556	4.32	-0.196	2.35
1/29/2013	12:02:00	14.785	14.545	0.240	0.554	4.32	-0.194	2.32
1/29/2013	12:17:00	14.782	14.543	0.239	0.551	4.32	-0.191	2.30
1/29/2013	12:32:00	14.776	14.534	0.242	0.558	4.32	-0.198	2.38
1/29/2013	12:47:00	14.774	14.536	0.238	0.549	4.32	-0.189	2.27
1/29/2013	13:02:00	14.771	14.529	0.242	0.558	4.32	-0.198	2.38
1/29/2013	13:17:00	14.764	14.526	0.238	0.549	4.32	-0.189	2.27
1/29/2013	13:32:00	14.762	14.525	0.237	0.547	4.32	-0.187	2.24
1/29/2013	13:47:00	14.756	14.521	0.235	0.542	4.32	-0.182	2.19
1/29/2013	14:02:00	14.754	14.516	0.238	0.549	4.32	-0.189	2.27
1/29/2013	14:17:00	14.752	14.510	0.242	0.558	4.32	-0.198	2.38
1/29/2013	14:32:00	14.753	14.515	0.238	0.549	4.32	-0.189	2.27
1/29/2013	14:47:00	14.751	14.515	0.236	0.544	4.32	-0.184	2.21
1/29/2013	15:02:00	14.756	14.516	0.240	0.554	4.32	-0.194	2.32
1/29/2013	15:17:00	14.754	14.514	0.240	0.554	4.32	-0.194	2.32
1/29/2013	15:32:00	14.745	14.512	0.233	0.538	4.32	-0.178	2.13
1/29/2013	15:47:00	14.750	14.515	0.235	0.542	4.32	-0.182	2.19
1/29/2013	16:02:00	14.746	14.509	0.237	0.547	4.32	-0.187	2.24
1/29/2013	16:17:00	14.742	14.507	0.235	0.542	4.32	-0.182	2.19
1/29/2013	16:32:00	14.739	14.510	0.229	0.528	4.32	-0.168	2.02
1/29/2013	16:47:00	14.744	14.505	0.239	0.551	4.32	-0.191	2.30
1/29/2013	17:02:00	14.740	14.507	0.233	0.538	4.32	-0.178	2.13
1/29/2013	17:17:00	14.743	14.501	0.242	0.558	4.32	-0.198	2.38
1/29/2013	17:32:00	14.740	14.499	0.241	0.556	4.32	-0.196	2.35
1/29/2013	17:47:00	14.740	14.498	0.242	0.558	4.32	-0.198	2.38
1/29/2013	18:02:00	14.737	14.501	0.236	0.544	4.32	-0.184	2.21
1/29/2013	18:17:00	14.737	14.501	0.236	0.544	4.32	-0.184	2.21
1/29/2013	18:32:00	14.740	14.498	0.242	0.558	4.32	-0.198	2.38
1/29/2013	18:47:00	14.730	14.496	0.234	0.540	4.32	-0.180	2.16
1/29/2013	19:02:00	14.736	14.499	0.237	0.547	4.32	-0.187	2.24
1/29/2013	19:17:00	14.736	14.499	0.237	0.547	4.32	-0.187	2.24
1/29/2013	19:32:00	14.741	14.500	0.241	0.556	4.32	-0.196	2.35
1/29/2013	19:47:00	14.737	14.497	0.240	0.554	4.32	-0.194	2.32
1/29/2013	20:02:00	14.729	14.494	0.235	0.542	4.32	-0.182	2.19
1/29/2013	20:17:00	14.738	14.496	0.242	0.558	4.32	-0.198	2.38
1/29/2013	20:32:00	14.732	14.494	0.238	0.549	4.32	-0.189	2.27
1/29/2013	20:47:00	14.730	14.494	0.236	0.544	4.32	-0.184	2.21
1/29/2013	21:02:00	14.735	14.491	0.244	0.563	4.32	-0.203	2.43
1/29/2013	21:17:00	14.732	14.495	0.237	0.547	4.32	-0.187	2.24
1/29/2013	21:32:00	14.729	14.497	0.232	0.535	4.32	-0.175	2.10
1/29/2013	21:47:00	14.731	14.495	0.236	0.544	4.32	-0.184	2.21
1/29/2013	22:02:00	14.730	14.498	0.232	0.535	4.32	-0.175	2.10
1/29/2013	22:17:00	14.740	14.497	0.243	0.561	4.32	-0.201	2.41
1/29/2013	22:32:00	14.729	14.494	0.235	0.542	4.32	-0.182	2.19
1/29/2013	22:47:00	14.725	14.490	0.235	0.542	4.32	-0.182	2.19
1/29/2013	23:02:00	14.726	14.493	0.233	0.538	4.32	-0.178	2.13
1/29/2013	23:17:00	14.730	14.489	0.241	0.556	4.32	-0.196	2.35
1/29/2013	23:32:00	14.725	14.486	0.239	0.551	4.32	-0.191	2.30
1/29/2013	23:47:00	14.724	14.484	0.240	0.554	4.32	-0.194	2.32
1/30/2013	0:02:00	14.727	14.485	0.242	0.558	4.32	-0.198	2.38
1/30/2013	0:17:00	14.721	14.483	0.238	0.549	4.32	-0.189	2.27
1/30/2013	0:32:00	14.720	14.483	0.237	0.547	4.32	-0.187	2.24
1/30/2013	0:47:00	14.722	14.481	0.241	0.556	4.32	-0.196	2.35
1/30/2013	1:02:00	14.720	14.480	0.240	0.554	4.32	-0.194	2.32
1/30/2013	1:17:00	14.718	14.475	0.243	0.561	4.32	-0.201	2.41
1/30/2013	1:32:00	14.719	14.478	0.241	0.556	4.32	-0.196	2.35
1/30/2013	1:47:00	14.713	14.475	0.238	0.549	4.32	-0.189	2.27
1/30/2013	2:02:00	14.706	14.472	0.234	0.540	4.32	-0.180	2.16
1/30/2013	2:17:00	14.710	14.467	0.243	0.561	4.32	-0.201	2.41
1/30/2013	2:32:00	14.701	14.458	0.243	0.561	4.32	-0.201	2.41
1/30/2013	2:47:00	14.690	14.462	0.228	0.526	4.32	-0.166	1.99
1/30/2013	3:02:00	14.695	14.461	0.234	0.540	4.32	-0.180	2.16
1/30/2013	3:17:00	14.695	14.458	0.237	0.547	4.32	-0.187	2.24
1/30/2013	3:32:00	14.690	14.452	0.238	0.549	4.32	-0.189	2.27
1/30/2013	3:47:00	14.691	14.452	0.239	0.551	4.32	-0.191	2.30
1/30/2013	4:02:00	14.687	14.451	0.236	0.544	4.32	-0.184	2.21
1/30/2013	4:17:00	14.686	14.446	0.240	0.554	4.32	-0.194	2.32
1/30/2013	4:32:00	14.687	14.448	0.239	0.551	4.32	-0.191	2.30
1/30/2013	4:47:00	14.683	14.441	0.242	0.558	4.32	-0.198	2.38
1/30/2013	5:02:00	14.681	14.438	0.243	0.561	4.32	-0.201	2.41
1/30/2013	5:17:00	14.675	14.437	0.238	0.549	4.32	-0.189	2.27
1/30/2013	5:32:00	14.670	14.429	0.241	0.556	4.32	-0.196	2.35
1/30/2013	5:47:00	14.667	14.427	0.240	0.554	4.32	-0.194	2.32
1/30/2013	6:02:00	14.663	14.429	0.234	0.540	4.32	-0.180	2.16
1/30/2013	6:17:00	14.673	14.432	0.241	0.556	4.32	-0.196	2.35
1/30/2013	6:32:00	14.669	14.425	0.244	0.563	4.32	-0.203	2.43
1/30/2013	6:47:00	14.668	14.426	0.242	0.558	4.32	-0.198	2.38
1/30/2013	7:02:00	14.659	14.422	0.237	0.547	4.32	-0.187	2.24
1/30/2013	7:17:00	14.662	14.425	0.237	0.547	4.32	-0.187	2.24
1/30/2013	7:32:00	14.663	14.421	0.242	0.558	4.32	-0.198	2.38
1/30/2013	7:47:00	14.659	14.422	0.237	0.547	4.32	-0.187	2.24
1/30/2013	8:02:00	14.651	14.413	0.238	0.549	4.32	-0.189	2.27
1/30/2013	8:17:00	14.656	14.422	0.234	0.540	4.32	-0.180	2.16
1/30/2013	8:32:00	14.653	14.413	0.240	0.554	4.32	-0.194	2.32
1/30/2013	8:47:00	14.650	14.415	0.235	0.542	4.32	-0.182	2.19
1/30/2013	9:02:00	14.647	14.409	0.238	0.549	4.32	-0.189	2.27
1/30/2013	9:17:00	14.645	14.403	0.242	0.558	4.32	-0.198	2.38
1/30/2013	9:32:00	14.644	14.403	0.241	0.556	4.32	-0.196	2.35
1/30/2013	9:47:00	14.645	14.408	0.237	0.547	4.32	-0.187	2.24
1/30/2013	10:02:00	14.642	14.409	0.233	0.538	4.32	-0.178	2.13
1/30/2013	10:17:00	14.640	14.407	0.233	0.538	4.32	-0.178	2.13
1/30/2013	10:32:00	14.645	14.406	0.239	0.551	4.32	-0.191	2.30
1/30/2013	10:47:00	14.637	14.402	0.235	0.542	4.32	-0.182	2.19
1/30/2013	11:02:00	14.630	14.391	0.239	0.551	4.32	-0.191	2.30
1/30/2013	11:17:00	14.626	14.390	0.236	0.544	4.32	-0.184	2.21
1/30/2013	11:32:00	14.613	14.378	0.235	0.542	4.32	-0.182	2.19
1/30/2013	11:47:00	14.610	14.374	0.236	0.544	4.32	-0.184	2.21
1/30/2013	12:02:00	14.606	14.372	0.234	0.540	4.32	-0.180	2.16
1/30/2013	12:17:00	14.602	14.361	0.241	0.556	4.32	-0.196	2.35
1/30/2013	12:32:00	14.594	14.349	0.245	0.565	4.32	-0.205	2.46
1/30/2013	12:47:00	14.589	14.357	0.232	0.535	4.32	-0.175	2.10
1/30/2013	13:02:00	14.588	14.344	0.244	0.563	4.32	-0.203	2.43
1/30/2013	13:17:00	14.580	14.337	0.243	0.561	4.32	-0.201	2.41
1/30/2013	13:32:00	14.573	14.332	0.241	0.556	4.32	-0.196	2.35
1/30/2013	13:47:00	14.560	14.317	0.243	0.561	4.32	-0.201	2.41
1/30/2013	14:02:00	14.553	14.311	0.242	0.558	4.32	-0.198	2.38
1/30/2013	14:17:00	14.551	14.308	0.243	0.561	4.32	-0.201	2.41
1/30/2013	14:32:00	14.540	14.305	0.235	0.542	4.32	-0.182	2.19
1/30/2013	14:47:00	14.548	14.310	0.238	0.549	4.32	-0.189	2.27
1/30/2013	15:02:00	14.549	14.312	0.237	0.547	4.32	-0.187	2.24
1/30/2013	15:17:00	14.534	14.295	0.239	0.551	4.32	-0.191	2.30
1/30/2013	15:32:00	14.532	14.292	0.240	0.554	4.32	-0.194	2.32
1/30/2013	15:47:00	14.529	14.287	0.242	0.558	4.32	-0.198	2.38
1/30/2013	16:02:00	14.522	14.285	0.237	0.547	4.32	-0.187	2.24
1/30/2013	16:17:00	14.520	14.282	0.238	0.549	4.32	-0.189	2.27
1/30/2013	16:32:00	14.520	14.277	0.243	0.561	4.32	-0.201	2.41
1/30/2013	16:47:00	14.511	14.274	0.237	0.547	4.32	-0.187	2.24
1/30/2013	17:02:00	14.501	14.267	0.234	0.540	4.32	-0.180	2.16
1/30/2013	17:17:00	14.503	14.262	0.241	0.556	4.32	-0.196	2.35
1/30/2013	17:32:00	14.496	14.263	0.233	0.538	4.32	-0.178	2.13
1/30/2013	17:47:00	14.494	14.260	0.234	0.540	4.32	-0.180	2.16
1/30/2013	18:02:00	14.483	14.251	0.232	0.535	4.32	-0.175	2.10
1/30/2013	18:17:00	14.484	14.246	0.238	0.549	4.32	-0.189	2.27
1/30/2013	18:32:00	14.473	14.239	0.234	0.540	4.32	-0.180	2.16
1/30/2013	18:47:00	14.478	14.244	0.234	0.540	4.32	-0.180	2.16
1/30/2013	19:02:00	14.471	14.238	0.233	0.538	4.32	-0.178	2.13
1/30/2013	19:17:00	14.473	14.229	0.244	0.563	4.32	-0.203	2.43
1/30/2013	19:32:00	14.468	14.228	0.240	0.554	4.32	-0.194	2.32
1/30/2013	19:47:00	14.459	14.229	0.230	0.531	4.32	-0.171	2.05

1/30/2013	20:02:00	14.461	14.223	0.238	0.549	4.32	-0.189	2.27	
1/30/2013	20:17:00	14.461	14.223	0.238	0.549	4.32	-0.189	2.27	
1/30/2013	20:32:00	14.454	14.224	0.230	0.531	4.32	-0.171	2.05	
1/30/2013	20:47:00	14.455	14.214	0.241	0.556	4.32	-0.196	2.35	0.02
1/30/2013	21:02:00	14.451	14.212	0.239	0.551	4.32	-0.191	2.30	0.04
1/30/2013	21:17:00	14.451	14.210	0.241	0.556	4.32	-0.196	2.35	0.06
1/30/2013	21:32:00	14.447	14.225	0.222	0.512	4.32	-0.152	1.83	0.08
1/30/2013	21:47:00	14.492	14.226	0.266	0.614	4.32	-0.254	3.04	0.10
1/30/2013	22:02:00	14.499	14.239	0.260	0.600	4.32	-0.240	2.88	0.12
1/30/2013	22:17:00	14.511	14.255	0.256	0.591	4.32	-0.231	2.77	0.14
1/30/2013	22:32:00	14.571	14.255	0.316	0.729	4.32	-0.369	4.43	0.16
1/30/2013	22:47:00	14.638	14.245	0.393	0.907	4.32	-0.547	6.56	0.18
1/30/2013	23:02:00	14.641	14.254	0.387	0.893	4.32	-0.533	6.39	0.20
1/30/2013	23:17:00	14.636	14.268	0.368	0.849	4.32	-0.489	5.87	0.22
1/30/2013	23:32:00	14.625	14.265	0.360	0.831	4.32	-0.471	5.65	0.25
1/30/2013	23:47:00	14.612	14.262	0.350	0.807	4.32	-0.447	5.37	0.28
1/31/2013	0:02:00	14.609	14.268	0.341	0.787	4.32	-0.427	5.12	
1/31/2013	0:17:00	14.604	14.259	0.345	0.796	4.32	-0.436	5.23	
1/31/2013	0:32:00	14.612	14.258	0.354	0.817	4.32	-0.457	5.48	
1/31/2013	0:47:00	14.613	14.260	0.353	0.814	4.32	-0.454	5.45	
1/31/2013	1:02:00	14.612	14.255	0.357	0.824	4.32	-0.464	5.56	
1/31/2013	1:17:00	14.610	14.257	0.353	0.814	4.32	-0.454	5.45	
1/31/2013	1:32:00	14.605	14.261	0.344	0.794	4.32	-0.434	5.20	
1/31/2013	1:47:00	14.595	14.262	0.333	0.768	4.32	-0.408	4.90	
1/31/2013	2:02:00	14.598	14.264	0.334	0.771	4.32	-0.411	4.93	
1/31/2013	2:17:00	14.590	14.267	0.323	0.745	4.32	-0.385	4.62	
1/31/2013	2:32:00	14.584	14.263	0.321	0.741	4.32	-0.381	4.57	
1/31/2013	2:47:00	14.589	14.275	0.314	0.724	4.32	-0.364	4.37	
1/31/2013	3:02:00	14.586	14.276	0.310	0.715	4.32	-0.355	4.26	
1/31/2013	3:17:00	14.590	14.282	0.308	0.711	4.32	-0.351	4.21	
1/31/2013	3:32:00	14.589	14.276	0.313	0.722	4.32	-0.362	4.35	
1/31/2013	3:47:00	14.593	14.293	0.300	0.692	4.32	-0.332	3.99	
1/31/2013	4:02:00	14.593	14.287	0.306	0.706	4.32	-0.346	4.15	
1/31/2013	4:17:00	14.595	14.297	0.298	0.687	4.32	-0.327	3.93	
1/31/2013	4:32:00	14.593	14.304	0.289	0.667	4.32	-0.307	3.68	
1/31/2013	4:47:00	14.597	14.309	0.288	0.664	4.32	-0.304	3.65	
1/31/2013	5:02:00	14.607	14.315	0.292	0.674	4.32	-0.314	3.76	
1/31/2013	5:17:00	14.611	14.320	0.291	0.671	4.32	-0.311	3.74	
1/31/2013	5:32:00	14.614	14.324	0.290	0.669	4.32	-0.309	3.71	
1/31/2013	5:47:00	14.616	14.330	0.286	0.660	4.32	-0.300	3.60	
1/31/2013	6:02:00	14.619	14.339	0.280	0.646	4.32	-0.286	3.43	
1/31/2013	6:17:00	14.626	14.344	0.282	0.651	4.32	-0.291	3.49	
1/31/2013	6:32:00	14.629	14.351	0.278	0.641	4.32	-0.281	3.38	
1/31/2013	6:47:00	14.630	14.352	0.278	0.641	4.32	-0.281	3.38	
1/31/2013	7:02:00	14.634	14.361	0.273	0.630	4.32	-0.270	3.24	
1/31/2013	7:17:00	14.642	14.370	0.272	0.628	4.32	-0.268	3.21	
1/31/2013	7:32:00	14.646	14.377	0.269	0.621	4.32	-0.261	3.13	
1/31/2013	7:47:00	14.653	14.385	0.268	0.618	4.32	-0.258	3.10	
1/31/2013	8:02:00	14.664	14.390	0.274	0.632	4.32	-0.272	3.27	
1/31/2013	8:17:00	14.668	14.399	0.269	0.621	4.32	-0.261	3.13	
1/31/2013	8:32:00	14.672	14.403	0.269	0.621	4.32	-0.261	3.13	
1/31/2013	8:47:00	14.673	14.403	0.270	0.623	4.32	-0.263	3.15	
1/31/2013	9:02:00	14.679	14.408	0.271	0.625	4.32	-0.265	3.18	
1/31/2013	9:17:00	14.676	14.410	0.266	0.614	4.32	-0.254	3.04	
1/31/2013	9:32:00	14.686	14.419	0.267	0.616	4.32	-0.256	3.07	
1/31/2013	9:47:00	14.685	14.421	0.264	0.609	4.32	-0.249	2.99	
1/31/2013	10:02:00	14.687	14.420	0.267	0.616	4.32	-0.256	3.07	
1/31/2013	10:17:00	14.692	14.423	0.269	0.621	4.32	-0.261	3.13	
1/31/2013	10:32:00	14.687	14.428	0.259	0.598	4.32	-0.238	2.85	
1/31/2013	10:47:00	14.694	14.427	0.267	0.616	4.32	-0.256	3.07	
1/31/2013	11:02:00	14.690	14.426	0.264	0.609	4.32	-0.249	2.99	
1/31/2013	11:17:00	14.693	14.423	0.270	0.623	4.32	-0.263	3.15	
1/31/2013	11:32:00	14.688	14.417	0.271	0.625	4.32	-0.265	3.18	
1/31/2013	11:47:00	14.686	14.422	0.264	0.609	4.32	-0.249	2.99	
1/31/2013	12:02:00	14.680	14.423	0.257	0.593	4.32	-0.233	2.79	
1/31/2013	12:17:00	14.684	14.419	0.265	0.611	4.32	-0.251	3.02	
1/31/2013	12:32:00	14.688	14.420	0.268	0.618	4.32	-0.258	3.10	
1/31/2013	12:47:00	14.682	14.416	0.266	0.614	4.32	-0.254	3.04	
1/31/2013	13:02:00	14.677	14.417	0.260	0.600	4.32	-0.240	2.88	
1/31/2013	13:17:00	14.679	14.415	0.264	0.609	4.32	-0.249	2.99	
1/31/2013	13:32:00	14.676	14.416	0.260	0.600	4.32	-0.240	2.88	
1/31/2013	13:47:00	14.675	14.419	0.256	0.591	4.32	-0.231	2.77	
1/31/2013	14:02:00	14.676	14.419	0.257	0.593	4.32	-0.233	2.79	
1/31/2013	14:17:00	14.676	14.415	0.261	0.602	4.32	-0.242	2.91	
1/31/2013	14:32:00	14.677	14.422	0.255	0.588	4.32	-0.228	2.74	
1/31/2013	14:47:00	14.678	14.425	0.253	0.584	4.32	-0.224	2.68	
1/31/2013	15:02:00	14.678	14.426	0.252	0.581	4.32	-0.221	2.66	
1/31/2013	15:17:00	14.680	14.433	0.247	0.570	4.32	-0.210	2.52	
1/31/2013	15:32:00	14.691	14.439	0.252	0.581	4.32	-0.221	2.66	
1/31/2013	15:47:00	14.690	14.434	0.256	0.591	4.32	-0.231	2.77	
1/31/2013	16:02:00	14.696	14.439	0.257	0.593	4.32	-0.233	2.79	
1/31/2013	16:17:00	14.696	14.438	0.258	0.595	4.32	-0.235	2.82	
1/31/2013	16:32:00	14.699	14.446	0.253	0.584	4.32	-0.224	2.68	
1/31/2013	16:47:00	14.696	14.439	0.257	0.593	4.32	-0.233	2.79	
1/31/2013	17:02:00	14.694	14.444	0.250	0.577	4.32	-0.217	2.60	
1/31/2013	17:17:00	14.694	14.441	0.253	0.584	4.32	-0.224	2.68	
1/31/2013	17:32:00	14.698	14.442	0.256	0.591	4.32	-0.231	2.77	
1/31/2013	17:47:00	14.700	14.445	0.255	0.588	4.32	-0.228	2.74	
1/31/2013	18:02:00	14.699	14.453	0.246	0.568	4.32	-0.208	2.49	
1/31/2013	18:17:00	14.706	14.452	0.254	0.586	4.32	-0.226	2.71	
1/31/2013	18:32:00	14.705	14.459	0.246	0.568	4.32	-0.208	2.49	
1/31/2013	18:47:00	14.706	14.463	0.243	0.561	4.32	-0.201	2.41	
1/31/2013	19:02:00	14.712	14.467	0.245	0.565	4.32	-0.205	2.46	
1/31/2013	19:17:00	14.714	14.473	0.241	0.556	4.32	-0.196	2.35	
1/31/2013	19:32:00	14.715	14.468	0.247	0.570	4.32	-0.210	2.52	
1/31/2013	19:47:00	14.720	14.473	0.247	0.570	4.32	-0.210	2.52	
1/31/2013	20:02:00	14.716	14.473	0.243	0.561	4.32	-0.201	2.41	
1/31/2013	20:17:00	14.720	14.472	0.248	0.572	4.32	-0.212	2.55	
1/31/2013	20:32:00	14.719	14.475	0.244	0.563	4.32	-0.203	2.43	
1/31/2013	20:47:00	14.719	14.475	0.244	0.563	4.32	-0.203	2.43	
1/31/2013	21:02:00	14.720	14.481	0.239	0.551	4.32	-0.191	2.30	
1/31/2013	21:17:00	14.720	14.476	0.244	0.563	4.32	-0.203	2.43	
1/31/2013	21:32:00	14.723	14.485	0.238	0.549	4.32	-0.189	2.27	
1/31/2013	21:47:00	14.725	14.474	0.251	0.579	4.32	-0.219	2.63	
1/31/2013	22:02:00	14.720	14.488	0.232	0.535	4.32	-0.175	2.10	
1/31/2013	22:17:00	14.727	14.502	0.225	0.519	4.32	-0.159	1.91	
1/31/2013	22:32:00	14.730	14.476	0.254	0.586	4.32	-0.226	2.71	
1/31/2013	22:47:00	14.731	14.478	0.253	0.584	4.32	-0.224	2.68	
1/31/2013	23:02:00	14.728	14.487	0.241	0.556	4.32	-0.196	2.35	
1/31/2013	23:17:00	14.732	14.472	0.260	0.600	4.32	-0.240	2.88	
1/31/2013	23:32:00	14.731	14.496	0.235	0.542	4.32	-0.182	2.19	
1/31/2013	23:47:00	14.727	14.478	0.249	0.574	4.32	-0.214	2.57	
2/1/2013	0:02:00	14.729	14.495	0.234	0.540	4.32	-0.180	2.16	
2/1/2013	0:17:00	14.729	14.488	0.241	0.556	4.32	-0.196	2.35	
2/1/2013	0:32:00	14.725	14.494	0.231	0.533	4.32	-0.173	2.08	
2/1/2013	0:47:00	14.722	14.480	0.242	0.558	4.32	-0.198	2.38	
2/1/2013	1:02:00	14.724	14.487	0.237	0.547	4.32	-0.187	2.24	
2/1/2013	1:17:00	14.725	14.478	0.247	0.570	4.32	-0.210	2.52	
2/1/2013	1:32:00	14.714	14.476	0.238	0.549	4.32	-0.189	2.27	
2/1/2013	1:47:00	14.730	14.474	0.256	0.591	4.32	-0.231	2.77	
2/1/2013	2:02:00	14.708	14.481	0.227	0.524	4.32	-0.164	1.96	
2/1/2013	2:17:00	14.718	14.482	0.236	0.544	4.32	-0.184	2.21	
2/1/2013	2:32:00	14.709	14.474	0.235	0.542	4.32	-0.182	2.19	
2/1/2013	2:47:00	14.700	14.471	0.229	0.528	4.32	-0.168	2.02	
2/1/2013	3:02:00	14.726	14.460	0.266	0.614	4.32	-0.254	3.04	
2/1/2013	3:17:00	14.712	14.458	0.254	0.586	4.32	-0.226	2.71	
2/1/2013	3:32:00	14.701	14.451	0.250	0.577	4.32	-0.217	2.60	
2/1/2013	3:47:00	14.697	14.451	0.246	0.568	4.32	-0.208	2.49	
2/1/2013	4:02:00	14.709	14.446	0.263	0.607	4.32	-0.247	2.96	
2/1/2013	4:17:00	14.699	14.445	0.254	0.586	4.32	-0.226	2.71	
2/1/2013	4:32:00	14.702	14.449	0.253	0.584	4.32	-0.224	2.68	
2/1/2013	4:47:00	14.685	14.445	0.240	0.554	4.32	-0.194	2.32	
2/1/2013	5:02:00	14.680	14.436	0.244	0.563	4.32	-0.203	2.43	

2/1/2013	5:17:00	14.693	14.439	0.254	0.586	4.32	-0.226	2.71
2/1/2013	5:32:00	14.689	14.437	0.252	0.581	4.32	-0.221	2.66
2/1/2013	5:47:00	14.686	14.439	0.247	0.570	4.32	-0.210	2.52
2/1/2013	6:02:00	14.689	14.440	0.249	0.574	4.32	-0.214	2.57
2/1/2013	6:17:00	14.677	14.441	0.236	0.544	4.32	-0.184	2.21
2/1/2013	6:32:00	14.682	14.455	0.227	0.524	4.32	-0.164	1.96
2/1/2013	6:47:00	14.694	14.460	0.234	0.540	4.32	-0.180	2.16
2/1/2013	7:02:00	14.718	14.465	0.253	0.584	4.32	-0.224	2.68
2/1/2013	7:17:00	14.714	14.475	0.239	0.551	4.32	-0.191	2.30
2/1/2013	7:32:00	14.706	14.479	0.227	0.524	4.32	-0.164	1.96
2/1/2013	7:47:00	14.733	14.480	0.253	0.584	4.32	-0.224	2.68
2/1/2013	8:02:00	14.734	14.497	0.237	0.547	4.32	-0.187	2.24
2/1/2013	8:17:00	14.747	14.500	0.247	0.570	4.32	-0.210	2.52
2/1/2013	8:32:00	14.744	14.501	0.243	0.561	4.32	-0.201	2.41
2/1/2013	8:47:00	14.759	14.518	0.241	0.556	4.32	-0.196	2.35
2/1/2013	9:02:00	14.764	14.523	0.241	0.556	4.32	-0.196	2.35
2/1/2013	9:17:00	14.777	14.530	0.247	0.570	4.32	-0.210	2.52
2/1/2013	9:32:00	14.779	14.545	0.234	0.540	4.32	-0.180	2.16
2/1/2013	9:47:00	14.784	14.544	0.240	0.554	4.32	-0.194	2.32
2/1/2013	10:02:00	14.797	14.551	0.246	0.568	4.32	-0.208	2.49
2/1/2013	10:17:00	14.800	14.558	0.242	0.558	4.32	-0.198	2.38
2/1/2013	10:32:00	14.802	14.566	0.236	0.544	4.32	-0.184	2.21
2/1/2013	10:47:00	14.806	14.565	0.241	0.556	4.32	-0.196	2.35
2/1/2013	11:02:00	14.810	14.574	0.236	0.544	4.32	-0.184	2.21
2/1/2013	11:17:00	14.813	14.574	0.239	0.551	4.32	-0.191	2.30
2/1/2013	11:32:00	14.814	14.574	0.240	0.554	4.32	-0.194	2.32
2/1/2013	11:47:00	14.818	14.577	0.241	0.556	4.32	-0.196	2.35
2/1/2013	12:02:00	14.824	14.573	0.251	0.579	4.32	-0.219	2.63
2/1/2013	12:17:00	14.818	14.576	0.242	0.558	4.32	-0.198	2.38
2/1/2013	12:32:00	14.824	14.575	0.249	0.574	4.32	-0.214	2.57
2/1/2013	12:47:00	14.818	14.574	0.244	0.563	4.32	-0.203	2.43
2/1/2013	13:02:00	14.816	14.574	0.242	0.558	4.32	-0.198	2.38
2/1/2013	13:17:00	14.822	14.575	0.247	0.570	4.32	-0.210	2.52
2/1/2013	13:32:00	14.819	14.571	0.248	0.572	4.32	-0.212	2.55
2/1/2013	13:47:00	14.817	14.572	0.245	0.565	4.32	-0.205	2.46
2/1/2013	14:02:00	14.817	14.581	0.236	0.544	4.32	-0.184	2.21
2/1/2013	14:17:00	14.816	14.579	0.237	0.547	4.32	-0.187	2.24
2/1/2013	14:32:00	14.814	14.579	0.235	0.542	4.32	-0.182	2.19
2/1/2013	14:47:00	14.813	14.581	0.232	0.535	4.32	-0.175	2.10
2/1/2013	15:02:00	14.823	14.581	0.242	0.558	4.32	-0.198	2.38
2/1/2013	15:17:00	14.825	14.579	0.246	0.568	4.32	-0.208	2.49
2/1/2013	15:32:00	14.822	14.579	0.243	0.561	4.32	-0.201	2.41
2/1/2013	15:47:00	14.816	14.579	0.237	0.547	4.32	-0.187	2.24
2/1/2013	16:02:00	14.818	14.579	0.239	0.551	4.32	-0.191	2.30
2/1/2013	16:17:00	14.820	14.579	0.241	0.556	4.32	-0.196	2.35
2/1/2013	16:32:00	14.815	14.587	0.228	0.526	4.32	-0.166	1.99
2/1/2013	16:47:00	14.818	14.596	0.222	0.512	4.32	-0.152	1.83
2/1/2013	17:02:00	14.818	14.589	0.229	0.528	4.32	-0.168	2.02
2/1/2013	17:17:00	14.825	14.586	0.239	0.551	4.32	-0.191	2.30
2/1/2013	17:32:00	14.830	14.593	0.237	0.547	4.32	-0.187	2.24
2/1/2013	17:47:00	14.829	14.592	0.237	0.547	4.32	-0.187	2.24
2/1/2013	18:02:00	14.827	14.598	0.229	0.528	4.32	-0.168	2.02
2/1/2013	18:17:00	14.834	14.601	0.233	0.538	4.32	-0.178	2.13
2/1/2013	18:32:00	14.832	14.602	0.230	0.531	4.32	-0.171	2.05
2/1/2013	18:47:00	14.839	14.605	0.234	0.540	4.32	-0.180	2.16
2/1/2013	19:02:00	14.839	14.615	0.224	0.517	4.32	-0.157	1.88
2/1/2013	19:17:00	14.837	14.610	0.227	0.524	4.32	-0.164	1.96
2/1/2013	19:32:00	14.836	14.612	0.224	0.517	4.32	-0.157	1.88
2/1/2013	19:47:00	14.843	14.617	0.226	0.521	4.32	-0.161	1.94
2/1/2013	20:02:00	14.844	14.619	0.225	0.519	4.32	-0.159	1.91
2/1/2013	20:17:00	14.847	14.625	0.222	0.512	4.32	-0.152	1.83
2/1/2013	20:32:00	14.851	14.621	0.230	0.531	4.32	-0.171	2.05
2/1/2013	20:47:00	14.857	14.616	0.241	0.556	4.32	-0.196	2.35
2/1/2013	21:02:00	14.851	14.615	0.236	0.544	4.32	-0.184	2.21
2/1/2013	21:17:00	14.860	14.640	0.220	0.508	4.32	-0.148	1.77
2/1/2013	21:32:00	14.864	14.620	0.244	0.563	4.32	-0.203	2.43
2/1/2013	21:47:00	14.864	14.646	0.218	0.503	4.32	-0.143	1.72
2/1/2013	22:02:00	14.858	14.624	0.234	0.540	4.32	-0.180	2.16
2/1/2013	22:17:00	14.871	14.646	0.225	0.519	4.32	-0.159	1.91
2/1/2013	22:32:00	14.872	14.628	0.244	0.563	4.32	-0.203	2.43
2/1/2013	22:47:00	14.874	14.626	0.248	0.572	4.32	-0.212	2.55
2/1/2013	23:02:00	14.870	14.652	0.218	0.503	4.32	-0.143	1.72
2/1/2013	23:17:00	14.848	14.637	0.211	0.487	4.32	-0.127	1.52
2/1/2013	23:32:00	14.868	14.635	0.233	0.538	4.32	-0.178	2.13
2/1/2013	23:47:00	14.864	14.632	0.232	0.535	4.32	-0.175	2.10
2/2/2013	0:02:00	14.852	14.651	0.201	0.464	4.32	-0.104	1.24
2/2/2013	0:17:00	14.879	14.635	0.244	0.563	4.32	-0.203	2.43
2/2/2013	0:32:00	14.866	14.657	0.209	0.482	4.32	-0.122	1.47
2/2/2013	0:47:00	14.868	14.638	0.230	0.531	4.32	-0.171	2.05
2/2/2013	1:02:00	14.886	14.639	0.247	0.570	4.32	-0.210	2.52
2/2/2013	1:17:00	14.864	14.640	0.224	0.517	4.32	-0.157	1.88
2/2/2013	1:32:00	14.883	14.636	0.247	0.570	4.32	-0.210	2.52
2/2/2013	1:47:00	14.857	14.637	0.220	0.508	4.32	-0.148	1.77
2/2/2013	2:02:00	14.879	14.640	0.239	0.551	4.32	-0.191	2.30
2/2/2013	2:17:00	14.860	14.654	0.206	0.475	4.32	-0.115	1.38
2/2/2013	2:32:00	14.874	14.635	0.239	0.551	4.32	-0.191	2.30
2/2/2013	2:47:00	14.870	14.653	0.217	0.501	4.32	-0.141	1.69
2/2/2013	3:02:00	14.880	14.637	0.243	0.561	4.32	-0.201	2.41
2/2/2013	3:17:00	14.868	14.646	0.222	0.512	4.32	-0.152	1.83
2/2/2013	3:32:00	14.871	14.644	0.227	0.524	4.32	-0.164	1.96
2/2/2013	3:47:00	14.874	14.653	0.221	0.510	4.32	-0.150	1.80
2/2/2013	4:02:00	14.884	14.655	0.229	0.528	4.32	-0.168	2.02
2/2/2013	4:17:00	14.881	14.638	0.243	0.561	4.32	-0.201	2.41
2/2/2013	4:32:00	14.858	14.646	0.212	0.489	4.32	-0.129	1.55
2/2/2013	4:47:00	14.872	14.630	0.242	0.558	4.32	-0.198	2.38
2/2/2013	5:02:00	14.875	14.639	0.236	0.544	4.32	-0.184	2.21
2/2/2013	5:17:00	14.858	14.633	0.225	0.519	4.32	-0.159	1.91
2/2/2013	5:32:00	14.870	14.637	0.233	0.538	4.32	-0.178	2.13
2/2/2013	5:47:00	14.860	14.646	0.214	0.494	4.32	-0.134	1.60
2/2/2013	6:02:00	14.864	14.633	0.231	0.533	4.32	-0.173	2.08
2/2/2013	6:17:00	14.867	14.651	0.216	0.498	4.32	-0.138	1.66
2/2/2013	6:32:00	14.864	14.658	0.206	0.475	4.32	-0.115	1.38
2/2/2013	6:47:00	14.871	14.652	0.219	0.505	4.32	-0.145	1.74
2/2/2013	7:02:00	14.870	14.670	0.200	0.461	4.32	-0.101	1.22
2/2/2013	7:17:00	14.876	14.650	0.226	0.521	4.32	-0.161	1.94
2/2/2013	7:32:00	14.880	14.668	0.212	0.489	4.32	-0.129	1.55
2/2/2013	7:47:00	14.864	14.650	0.214	0.494	4.32	-0.134	1.60
2/2/2013	8:02:00	14.871	14.645	0.226	0.521	4.32	-0.161	1.94
2/2/2013	8:17:00	14.878	14.645	0.233	0.538	4.32	-0.178	2.13
2/2/2013	8:32:00	14.865	14.647	0.218	0.503	4.32	-0.143	1.72
2/2/2013	8:47:00	14.876	14.652	0.224	0.517	4.32	-0.157	1.88
2/2/2013	9:02:00	14.870	14.649	0.221	0.510	4.32	-0.150	1.80
2/2/2013	9:17:00	14.862	14.643	0.219	0.505	4.32	-0.145	1.74
2/2/2013	9:32:00	14.871	14.643	0.228	0.526	4.32	-0.166	1.99
2/2/2013	9:47:00	14.873	14.645	0.228	0.526	4.32	-0.166	1.99
2/2/2013	10:02:00	14.874	14.637	0.237	0.547	4.32	-0.187	2.24
2/2/2013	10:17:00	14.867	14.637	0.230	0.531	4.32	-0.171	2.05
2/2/2013	10:32:00	14.865	14.632	0.233	0.538	4.32	-0.178	2.13
2/2/2013	10:47:00	14.861	14.628	0.233	0.538	4.32	-0.178	2.13
2/2/2013	11:02:00	14.856	14.622	0.234	0.540	4.32	-0.180	2.16
2/2/2013	11:17:00	14.851	14.618	0.233	0.538	4.32	-0.178	2.13
2/2/2013	11:32:00	14.849	14.609	0.240	0.554	4.32	-0.194	2.32
2/2/2013	11:47:00	14.841	14.609	0.232	0.535	4.32	-0.175	2.10
2/2/2013	12:02:00	14.834	14.592	0.242	0.558	4.32	-0.198	2.38
2/2/2013	12:17:00	14.827	14.586	0.241	0.556	4.32	-0.196	2.35
2/2/2013	12:32:00	14.822	14.584	0.238	0.549	4.32	-0.189	2.27
2/2/2013	12:47:00	14.820	14.582	0.238	0.549	4.32	-0.189	2.27
2/2/2013	13:02:00	14.814	14.571	0.243	0.561	4.32	-0.201	2.41
2/2/2013	13:17:00	14.806	14.561	0.245	0.565	4.32	-0.205	2.46
2/2/2013	13:32:00	14.802	14.557	0.245	0.565	4.32	-0.205	2.46
2/2/2013	13:47:00	14.796	14.551	0.245	0.565	4.32	-0.205	2.46
2/2/2013	14:02:00	14.791	14.554	0.237	0.547	4.32	-0.187	2.24
2/2/2013	14:17:00	14.792	14.555	0.237	0.547	4.32	-0.187	2.24

2/2/2013	14:32:00	14.790	14.549	0.241	0.556	4.32	-0.196	2.35	
2/2/2013	14:47:00	14.789	14.542	0.247	0.570	4.32	-0.210	2.52	
2/2/2013	15:02:00	14.784	14.540	0.244	0.563	4.32	-0.203	2.43	
2/2/2013	15:17:00	14.774	14.533	0.241	0.556	4.32	-0.196	2.35	
2/2/2013	15:32:00	14.768	14.533	0.235	0.542	4.32	-0.182	2.19	
2/2/2013	15:47:00	14.770	14.523	0.247	0.570	4.32	-0.210	2.52	
2/2/2013	16:02:00	14.765	14.526	0.239	0.551	4.32	-0.191	2.30	
2/2/2013	16:17:00	14.761	14.529	0.232	0.535	4.32	-0.175	2.10	
2/2/2013	16:32:00	14.759	14.520	0.239	0.551	4.32	-0.191	2.30	
2/2/2013	16:47:00	14.751	14.518	0.233	0.538	4.32	-0.178	2.13	
2/2/2013	17:02:00	14.754	14.515	0.239	0.551	4.32	-0.191	2.30	
2/2/2013	17:17:00	14.749	14.509	0.240	0.554	4.32	-0.194	2.32	
2/2/2013	17:32:00	14.742	14.509	0.233	0.538	4.32	-0.178	2.13	
2/2/2013	17:47:00	14.741	14.512	0.229	0.528	4.32	-0.168	2.02	
2/2/2013	18:02:00	14.735	14.507	0.228	0.526	4.32	-0.166	1.99	
2/2/2013	18:17:00	14.741	14.501	0.240	0.554	4.32	-0.194	2.32	
2/2/2013	18:32:00	14.737	14.497	0.240	0.554	4.32	-0.194	2.32	
2/2/2013	18:47:00	14.731	14.498	0.233	0.538	4.32	-0.178	2.13	
2/2/2013	19:02:00	14.736	14.499	0.237	0.547	4.32	-0.187	2.24	
2/2/2013	19:17:00	14.729	14.496	0.233	0.538	4.32	-0.178	2.13	
2/2/2013	19:32:00	14.729	14.495	0.234	0.540	4.32	-0.180	2.16	
2/2/2013	19:47:00	14.734	14.499	0.235	0.542	4.32	-0.182	2.19	
2/2/2013	20:02:00	14.739	14.504	0.235	0.542	4.32	-0.182	2.19	
2/2/2013	20:17:00	14.736	14.507	0.229	0.528	4.32	-0.168	2.02	
2/2/2013	20:32:00	14.746	14.512	0.234	0.540	4.32	-0.180	2.16	
2/2/2013	20:47:00	14.752	14.517	0.235	0.542	4.32	-0.182	2.19	
2/2/2013	21:02:00	14.749	14.513	0.236	0.544	4.32	-0.184	2.21	
2/2/2013	21:17:00	14.751	14.507	0.244	0.563	4.32	-0.203	2.43	0.01
2/2/2013	21:32:00	14.741	14.498	0.243	0.561	4.32	-0.201	2.41	
2/2/2013	21:47:00	14.742	14.493	0.249	0.574	4.32	-0.214	2.57	
2/2/2013	22:02:00	14.736	14.503	0.233	0.538	4.32	-0.178	2.13	
2/2/2013	22:17:00	14.736	14.497	0.239	0.551	4.32	-0.191	2.30	
2/2/2013	22:32:00	14.735	14.502	0.233	0.538	4.32	-0.178	2.13	
2/2/2013	22:47:00	14.737	14.497	0.240	0.554	4.32	-0.194	2.32	
2/2/2013	23:02:00	14.735	14.496	0.239	0.551	4.32	-0.191	2.30	
2/2/2013	23:17:00	14.731	14.490	0.241	0.556	4.32	-0.196	2.35	
2/2/2013	23:32:00	14.721	14.477	0.244	0.563	4.32	-0.203	2.43	
2/2/2013	23:47:00	14.717	14.478	0.239	0.551	4.32	-0.191	2.30	
2/3/2013	0:02:00	14.715	14.475	0.240	0.554	4.32	-0.194	2.32	
2/3/2013	0:17:00	14.717	14.474	0.243	0.561	4.32	-0.201	2.41	
2/3/2013	0:32:00	14.712	14.471	0.241	0.556	4.32	-0.196	2.35	
2/3/2013	0:47:00	14.708	14.466	0.242	0.558	4.32	-0.198	2.38	
2/3/2013	1:02:00	14.705	14.471	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	1:17:00	14.705	14.466	0.239	0.551	4.32	-0.191	2.30	
2/3/2013	1:32:00	14.701	14.459	0.242	0.558	4.32	-0.198	2.38	
2/3/2013	1:47:00	14.698	14.459	0.239	0.551	4.32	-0.191	2.30	
2/3/2013	2:02:00	14.695	14.454	0.241	0.556	4.32	-0.196	2.35	
2/3/2013	2:17:00	14.692	14.453	0.239	0.551	4.32	-0.191	2.30	
2/3/2013	2:32:00	14.687	14.452	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	2:47:00	14.687	14.454	0.233	0.538	4.32	-0.178	2.13	
2/3/2013	3:02:00	14.684	14.448	0.236	0.544	4.32	-0.184	2.21	
2/3/2013	3:17:00	14.682	14.441	0.241	0.556	4.32	-0.196	2.35	
2/3/2013	3:32:00	14.680	14.439	0.241	0.556	4.32	-0.196	2.35	
2/3/2013	3:47:00	14.676	14.434	0.242	0.558	4.32	-0.198	2.38	
2/3/2013	4:02:00	14.670	14.431	0.239	0.551	4.32	-0.191	2.30	
2/3/2013	4:17:00	14.663	14.429	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	4:32:00	14.666	14.428	0.238	0.549	4.32	-0.189	2.27	
2/3/2013	4:47:00	14.663	14.432	0.231	0.533	4.32	-0.173	2.08	
2/3/2013	5:02:00	14.669	14.427	0.242	0.558	4.32	-0.198	2.38	
2/3/2013	5:17:00	14.665	14.431	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	5:32:00	14.666	14.430	0.236	0.544	4.32	-0.184	2.21	
2/3/2013	5:47:00	14.671	14.429	0.242	0.558	4.32	-0.198	2.38	
2/3/2013	6:02:00	14.673	14.436	0.237	0.547	4.32	-0.187	2.24	
2/3/2013	6:17:00	14.671	14.441	0.230	0.531	4.32	-0.171	2.05	
2/3/2013	6:32:00	14.675	14.440	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	6:47:00	14.678	14.442	0.236	0.544	4.32	-0.184	2.21	
2/3/2013	7:02:00	14.674	14.444	0.230	0.531	4.32	-0.171	2.05	
2/3/2013	7:17:00	14.681	14.446	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	7:32:00	14.679	14.449	0.230	0.531	4.32	-0.171	2.05	
2/3/2013	7:47:00	14.685	14.445	0.240	0.554	4.32	-0.194	2.32	
2/3/2013	8:02:00	14.684	14.439	0.245	0.565	4.32	-0.205	2.46	
2/3/2013	8:17:00	14.689	14.446	0.243	0.561	4.32	-0.201	2.41	
2/3/2013	8:32:00	14.688	14.452	0.236	0.544	4.32	-0.184	2.21	
2/3/2013	8:47:00	14.689	14.449	0.240	0.554	4.32	-0.194	2.32	
2/3/2013	9:02:00	14.686	14.449	0.237	0.547	4.32	-0.187	2.24	
2/3/2013	9:17:00	14.692	14.448	0.244	0.563	4.32	-0.203	2.43	
2/3/2013	9:32:00	14.690	14.455	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	9:47:00	14.691	14.443	0.248	0.572	4.32	-0.212	2.55	
2/3/2013	10:02:00	14.685	14.449	0.236	0.544	4.32	-0.184	2.21	
2/3/2013	10:17:00	14.685	14.443	0.242	0.558	4.32	-0.198	2.38	
2/3/2013	10:32:00	14.681	14.447	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	10:47:00	14.683	14.444	0.239	0.551	4.32	-0.191	2.30	
2/3/2013	11:02:00	14.680	14.438	0.242	0.558	4.32	-0.198	2.38	
2/3/2013	11:17:00	14.676	14.437	0.239	0.551	4.32	-0.191	2.30	
2/3/2013	11:32:00	14.667	14.433	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	11:47:00	14.665	14.424	0.241	0.556	4.32	-0.196	2.35	
2/3/2013	12:02:00	14.661	14.420	0.241	0.556	4.32	-0.196	2.35	
2/3/2013	12:17:00	14.659	14.419	0.240	0.554	4.32	-0.194	2.32	
2/3/2013	12:32:00	14.654	14.416	0.238	0.549	4.32	-0.189	2.27	
2/3/2013	12:47:00	14.653	14.410	0.243	0.561	4.32	-0.201	2.41	
2/3/2013	13:02:00	14.643	14.407	0.236	0.544	4.32	-0.184	2.21	
2/3/2013	13:17:00	14.635	14.403	0.232	0.535	4.32	-0.175	2.10	
2/3/2013	13:32:00	14.631	14.401	0.230	0.531	4.32	-0.171	2.05	
2/3/2013	13:47:00	14.628	14.400	0.228	0.526	4.32	-0.166	1.99	
2/3/2013	14:02:00	14.630	14.397	0.233	0.538	4.32	-0.178	2.13	
2/3/2013	14:17:00	14.628	14.392	0.236	0.544	4.32	-0.184	2.21	
2/3/2013	14:32:00	14.627	14.392	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	14:47:00	14.626	14.395	0.231	0.533	4.32	-0.173	2.08	
2/3/2013	15:02:00	14.625	14.394	0.231	0.533	4.32	-0.173	2.08	
2/3/2013	15:17:00	14.631	14.396	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	15:32:00	14.629	14.400	0.229	0.528	4.32	-0.168	2.02	
2/3/2013	15:47:00	14.631	14.399	0.232	0.535	4.32	-0.175	2.10	
2/3/2013	16:02:00	14.629	14.396	0.233	0.538	4.32	-0.178	2.13	
2/3/2013	16:17:00	14.630	14.399	0.231	0.533	4.32	-0.173	2.08	
2/3/2013	16:32:00	14.628	14.399	0.229	0.528	4.32	-0.168	2.02	
2/3/2013	16:47:00	14.634	14.402	0.232	0.535	4.32	-0.175	2.10	
2/3/2013	17:02:00	14.635	14.403	0.232	0.535	4.32	-0.175	2.10	
2/3/2013	17:17:00	14.642	14.409	0.233	0.538	4.32	-0.178	2.13	
2/3/2013	17:32:00	14.645	14.414	0.231	0.533	4.32	-0.173	2.08	
2/3/2013	17:47:00	14.648	14.413	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	18:02:00	14.651	14.416	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	18:17:00	14.642	14.415	0.227	0.524	4.32	-0.164	1.96	
2/3/2013	18:32:00	14.656	14.422	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	18:47:00	14.655	14.421	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	19:02:00	14.659	14.425	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	19:17:00	14.662	14.434	0.228	0.526	4.32	-0.166	1.99	
2/3/2013	19:32:00	14.662	14.447	0.215	0.496	4.32	-0.136	1.63	
2/3/2013	19:47:00	14.669	14.442	0.227	0.524	4.32	-0.164	1.96	
2/3/2013	20:02:00	14.675	14.447	0.228	0.526	4.32	-0.166	1.99	
2/3/2013	20:17:00	14.676	14.450	0.226	0.521	4.32	-0.161	1.94	
2/3/2013	20:32:00	14.681	14.446	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	20:47:00	14.677	14.448	0.229	0.528	4.32	-0.168	2.02	
2/3/2013	21:02:00	14.689	14.451	0.238	0.549	4.32	-0.189	2.27	
2/3/2013	21:17:00	14.689	14.463	0.226	0.521	4.32	-0.161	1.94	
2/3/2013	21:32:00	14.689	14.457	0.232	0.535	4.32	-0.175	2.10	
2/3/2013	21:47:00	14.692	14.461	0.231	0.533	4.32	-0.173	2.08	
2/3/2013	22:02:00	14.695	14.461	0.234	0.540	4.32	-0.180	2.16	
2/3/2013	22:17:00	14.694	14.463	0.231	0.533	4.32	-0.173	2.08	
2/3/2013	22:32:00	14.690	14.462	0.228	0.526	4.32	-0.166	1.99	
2/3/2013	22:47:00	14.692	14.462	0.230	0.531	4.32	-0.171	2.05	
2/3/2013	23:02:00	14.695	14.460	0.235	0.542	4.32	-0.182	2.19	
2/3/2013	23:17:00	14.691	14.465	0.226	0.521	4.32	-0.161	1.94	
2/3/2013	23:32:00	14.690	14.468	0.222	0.512	4.32	-0.152	1.83	

2/3/2013	23:47:00	14.694	14.467	0.227	0.524	4.32	-0.164	1.96
2/4/2013	0:02:00	14.696	14.469	0.227	0.524	4.32	-0.164	1.96
2/4/2013	0:17:00	14.698	14.469	0.229	0.528	4.32	-0.168	2.02
2/4/2013	0:32:00	14.694	14.472	0.222	0.512	4.32	-0.152	1.83
2/4/2013	0:47:00	14.704	14.467	0.237	0.547	4.32	-0.187	2.24
2/4/2013	1:02:00	14.695	14.474	0.221	0.510	4.32	-0.150	1.80
2/4/2013	1:17:00	14.696	14.466	0.230	0.531	4.32	-0.171	2.05
2/4/2013	1:32:00	14.699	14.465	0.234	0.540	4.32	-0.180	2.16
2/4/2013	1:47:00	14.706	14.477	0.229	0.528	4.32	-0.168	2.02
2/4/2013	2:02:00	14.713	14.479	0.234	0.540	4.32	-0.180	2.16
2/4/2013	2:17:00	14.701	14.470	0.231	0.533	4.32	-0.173	2.08
2/4/2013	2:32:00	14.719	14.478	0.241	0.556	4.32	-0.196	2.35
2/4/2013	2:47:00	14.710	14.478	0.232	0.535	4.32	-0.175	2.10
2/4/2013	3:02:00	14.697	14.478	0.219	0.505	4.32	-0.145	1.74
2/4/2013	3:17:00	14.703	14.478	0.225	0.519	4.32	-0.159	1.91
2/4/2013	3:32:00	14.707	14.473	0.234	0.540	4.32	-0.180	2.16
2/4/2013	3:47:00	14.705	14.476	0.229	0.528	4.32	-0.168	2.02
2/4/2013	4:02:00	14.701	14.492	0.209	0.482	4.32	-0.122	1.47
2/4/2013	4:17:00	14.709	14.486	0.223	0.514	4.32	-0.154	1.85
2/4/2013	4:32:00	14.716	14.488	0.228	0.526	4.32	-0.166	1.99
2/4/2013	4:47:00	14.714	14.497	0.217	0.501	4.32	-0.141	1.69
2/4/2013	5:02:00	14.709	14.492	0.217	0.501	4.32	-0.141	1.69
2/4/2013	5:17:00	14.719	14.497	0.222	0.512	4.32	-0.152	1.83
2/4/2013	5:32:00	14.721	14.490	0.231	0.533	4.32	-0.173	2.08
2/4/2013	5:47:00	14.716	14.490	0.226	0.521	4.32	-0.161	1.94
2/4/2013	6:02:00	14.725	14.499	0.226	0.521	4.32	-0.161	1.94
2/4/2013	6:17:00	14.722	14.500	0.222	0.512	4.32	-0.152	1.83
2/4/2013	6:32:00	14.718	14.501	0.217	0.501	4.32	-0.141	1.69
2/4/2013	6:47:00	14.718	14.495	0.223	0.514	4.32	-0.154	1.85
2/4/2013	7:02:00	14.731	14.509	0.222	0.512	4.32	-0.152	1.83
2/4/2013	7:17:00	14.743	14.501	0.242	0.558	4.32	-0.198	2.38
2/4/2013	7:32:00	14.719	14.513	0.206	0.475	4.32	-0.115	1.38
2/4/2013	7:47:00	14.749	14.528	0.221	0.510	4.32	-0.150	1.80
2/4/2013	8:02:00	14.727	14.511	0.216	0.498	4.32	-0.138	1.66
2/4/2013	8:17:00	14.743	14.511	0.232	0.535	4.32	-0.175	2.10
2/4/2013	8:32:00	14.759	14.534	0.225	0.519	4.32	-0.159	1.91
2/4/2013	8:47:00	14.738	14.527	0.211	0.487	4.32	-0.127	1.52
2/4/2013	9:02:00	14.763	14.531	0.232	0.535	4.32	-0.175	2.10
2/4/2013	9:17:00	14.753	14.525	0.228	0.526	4.32	-0.166	1.99
2/4/2013	9:32:00	14.765	14.527	0.238	0.549	4.32	-0.189	2.27
2/4/2013	9:47:00	14.758	14.539	0.219	0.505	4.32	-0.145	1.74
2/4/2013	10:02:00	14.762	14.538	0.224	0.517	4.32	-0.157	1.88
2/4/2013	10:17:00	14.759	14.531	0.228	0.526	4.32	-0.166	1.99
2/4/2013	10:32:00	14.749	14.529	0.220	0.508	4.32	-0.148	1.77
2/4/2013	10:47:00	14.763	14.530	0.233	0.538	4.32	-0.178	2.13
2/4/2013	11:02:00	14.757	14.527	0.230	0.531	4.32	-0.171	2.05
2/4/2013	11:17:00	14.752	14.520	0.232	0.535	4.32	-0.175	2.10
2/4/2013	11:32:00	14.748	14.528	0.220	0.508	4.32	-0.148	1.77
2/4/2013	11:47:00	14.749	14.518	0.231	0.533	4.32	-0.173	2.08
2/4/2013	12:02:00	14.746	14.506	0.240	0.554	4.32	-0.194	2.32
2/4/2013	12:17:00	14.740	14.501	0.239	0.551	4.32	-0.191	2.30
2/4/2013	12:32:00	14.737	14.507	0.230	0.531	4.32	-0.171	2.05
2/4/2013	12:47:00	14.741	14.509	0.232	0.535	4.32	-0.175	2.10
2/4/2013	13:02:00	14.740	14.505	0.235	0.542	4.32	-0.182	2.19
2/4/2013	13:17:00	14.733	14.496	0.237	0.547	4.32	-0.187	2.24
2/4/2013	13:32:00	14.727	14.492	0.235	0.542	4.32	-0.182	2.19
2/4/2013	13:47:00	14.717	14.489	0.228	0.526	4.32	-0.166	1.99
2/4/2013	14:02:00	14.719	14.489	0.230	0.531	4.32	-0.171	2.05
2/4/2013	14:17:00	14.714	14.488	0.226	0.521	4.32	-0.161	1.94
2/4/2013	14:32:00	14.718	14.486	0.232	0.535	4.32	-0.175	2.10
2/4/2013	14:47:00	14.716	14.477	0.239	0.551	4.32	-0.191	2.30
2/4/2013	15:02:00	14.708	14.477	0.231	0.533	4.32	-0.173	2.08
2/4/2013	15:17:00	14.710	14.479	0.231	0.533	4.32	-0.173	2.08
2/4/2013	15:32:00	14.714	14.476	0.238	0.549	4.32	-0.189	2.27
2/4/2013	15:47:00	14.706	14.479	0.227	0.524	4.32	-0.164	1.96
2/4/2013	16:02:00	14.707	14.475	0.232	0.535	4.32	-0.175	2.10
2/4/2013	16:17:00	14.711	14.475	0.236	0.544	4.32	-0.184	2.21
2/4/2013	16:32:00	14.707	14.473	0.234	0.540	4.32	-0.180	2.16
2/4/2013	16:47:00	14.706	14.482	0.224	0.517	4.32	-0.157	1.88
2/4/2013	17:02:00	14.713	14.475	0.238	0.549	4.32	-0.189	2.27
2/4/2013	17:17:00	14.708	14.477	0.231	0.533	4.32	-0.173	2.08
2/4/2013	17:32:00	14.705	14.470	0.235	0.542	4.32	-0.182	2.19
2/4/2013	17:47:00	14.704	14.470	0.234	0.540	4.32	-0.180	2.16
2/4/2013	18:02:00	14.705	14.473	0.232	0.535	4.32	-0.175	2.10
2/4/2013	18:17:00	14.708	14.475	0.233	0.538	4.32	-0.178	2.13
2/4/2013	18:32:00	14.710	14.473	0.237	0.547	4.32	-0.187	2.24
2/4/2013	18:47:00	14.701	14.484	0.217	0.501	4.32	-0.141	1.69
2/4/2013	19:02:00	14.706	14.476	0.230	0.531	4.32	-0.171	2.05
2/4/2013	19:17:00	14.706	14.475	0.231	0.533	4.32	-0.173	2.08
2/4/2013	19:32:00	14.707	14.479	0.228	0.526	4.32	-0.166	1.99
2/4/2013	19:47:00	14.709	14.477	0.232	0.535	4.32	-0.175	2.10
2/4/2013	20:02:00	14.707	14.476	0.231	0.533	4.32	-0.173	2.08
2/4/2013	20:17:00	14.703	14.469	0.234	0.540	4.32	-0.180	2.16
2/4/2013	20:32:00	14.701	14.474	0.227	0.524	4.32	-0.164	1.96
2/4/2013	20:47:00	14.702	14.477	0.225	0.519	4.32	-0.159	1.91
2/4/2013	21:02:00	14.706	14.475	0.231	0.533	4.32	-0.173	2.08
2/4/2013	21:17:00	14.710	14.480	0.230	0.531	4.32	-0.171	2.05
2/4/2013	21:32:00	14.710	14.479	0.231	0.533	4.32	-0.173	2.08
2/4/2013	21:47:00	14.712	14.479	0.233	0.538	4.32	-0.178	2.13
2/4/2013	22:02:00	14.708	14.473	0.235	0.542	4.32	-0.182	2.19
2/4/2013	22:17:00	14.712	14.468	0.244	0.563	4.32	-0.203	2.43
2/4/2013	22:32:00	14.711	14.483	0.228	0.526	4.32	-0.166	1.99
2/4/2013	22:47:00	14.702	14.466	0.236	0.544	4.32	-0.184	2.21
2/4/2013	23:02:00	14.706	14.465	0.241	0.556	4.32	-0.196	2.35
2/4/2013	23:17:00	14.700	14.455	0.245	0.565	4.32	-0.205	2.46
2/4/2013	23:32:00	14.699	14.457	0.242	0.558	4.32	-0.198	2.38
2/4/2013	23:47:00	14.701	14.456	0.245	0.565	4.32	-0.205	2.46
2/5/2013	0:02:00	14.699	14.461	0.238	0.549	4.32	-0.189	2.27
2/5/2013	0:17:00	14.693	14.450	0.243	0.561	4.32	-0.201	2.41
2/5/2013	0:32:00	14.695	14.455	0.240	0.554	4.32	-0.194	2.32
2/5/2013	0:47:00	14.691	14.456	0.235	0.542	4.32	-0.182	2.19
2/5/2013	1:02:00	14.683	14.451	0.232	0.535	4.32	-0.175	2.10
2/5/2013	1:17:00	14.687	14.451	0.236	0.544	4.32	-0.184	2.21
2/5/2013	1:32:00	14.680	14.451	0.229	0.528	4.32	-0.168	2.02
2/5/2013	1:47:00	14.680	14.445	0.235	0.542	4.32	-0.182	2.19
2/5/2013	2:02:00	14.675	14.442	0.233	0.538	4.32	-0.178	2.13
2/5/2013	2:17:00	14.675	14.445	0.230	0.531	4.32	-0.171	2.05
2/5/2013	2:32:00	14.673	14.444	0.229	0.528	4.32	-0.168	2.02
2/5/2013	2:47:00	14.673	14.439	0.234	0.540	4.32	-0.180	2.16
2/5/2013	3:02:00	14.666	14.438	0.228	0.526	4.32	-0.166	1.99
2/5/2013	3:17:00	14.667	14.434	0.233	0.538	4.32	-0.178	2.13
2/5/2013	3:32:00	14.666	14.435	0.231	0.533	4.32	-0.173	2.08
2/5/2013	3:47:00	14.668	14.431	0.237	0.547	4.32	-0.187	2.24
2/5/2013	4:02:00	14.664	14.429	0.235	0.542	4.32	-0.182	2.19
2/5/2013	4:17:00	14.661	14.436	0.225	0.519	4.32	-0.159	1.91
2/5/2013	4:32:00	14.665	14.434	0.231	0.533	4.32	-0.173	2.08
2/5/2013	4:47:00	14.662	14.430	0.232	0.535	4.32	-0.175	2.10
2/5/2013	5:02:00	14.655	14.430	0.225	0.519	4.32	-0.159	1.91
2/5/2013	5:17:00	14.663	14.432	0.231	0.533	4.32	-0.173	2.08
2/5/2013	5:32:00	14.664	14.436	0.228	0.526	4.32	-0.166	1.99
2/5/2013	5:47:00	14.671	14.437	0.234	0.540	4.32	-0.180	2.16
2/5/2013	6:02:00	14.671	14.434	0.237	0.547	4.32	-0.187	2.24
2/5/2013	6:17:00	14.668	14.442	0.226	0.521	4.32	-0.161	1.94
2/5/2013	6:32:00	14.678	14.441	0.237	0.547	4.32	-0.187	2.24
2/5/2013	6:47:00	14.671	14.447	0.224	0.517	4.32	-0.157	1.88
2/5/2013	7:02:00	14.681	14.450	0.231	0.533	4.32	-0.173	2.08
2/5/2013	7:17:00	14.681	14.449	0.232	0.535	4.32	-0.175	2.10
2/5/2013	7:32:00	14.680	14.445	0.235	0.542	4.32	-0.182	2.19
2/5/2013	7:47:00	14.669	14.454	0.215	0.496	4.32	-0.136	1.63
2/5/2013	8:02:00	14.674	14.455	0.219	0.505	4.32	-0.145	1.74
2/5/2013	8:17:00	14.677	14.454	0.223	0.514	4.32	-0.154	1.85
2/5/2013	8:32:00	14.683	14.462	0.221	0.510	4.32	-0.150	1.80
2/5/2013	8:47:00	14.699	14.466	0.233	0.538	4.32	-0.178	2.13

2/5/2013	9:02:00	14.688	14.461	0.227	0.524	4.32	-0.164	1.96
2/5/2013	9:17:00	14.698	14.458	0.240	0.554	4.32	-0.194	2.32
2/5/2013	9:32:00	14.686	14.457	0.229	0.528	4.32	-0.168	2.02
2/5/2013	9:47:00	14.684	14.454	0.230	0.531	4.32	-0.171	2.05
2/5/2013	10:02:00	14.682	14.445	0.237	0.547	4.32	-0.187	2.24
2/5/2013	10:17:00	14.679	14.450	0.229	0.528	4.32	-0.168	2.02
2/5/2013	10:32:00	14.680	14.447	0.233	0.538	4.32	-0.178	2.13
2/5/2013	10:47:00	14.682	14.450	0.232	0.535	4.32	-0.175	2.10
2/5/2013	11:02:00	14.675	14.446	0.229	0.528	4.32	-0.168	2.02
2/5/2013	11:17:00	14.676	14.443	0.233	0.538	4.32	-0.178	2.13
2/5/2013	11:32:00	14.670	14.437	0.233	0.538	4.32	-0.178	2.13
2/5/2013	11:47:00	14.670	14.432	0.238	0.549	4.32	-0.189	2.27
2/5/2013	12:02:00	14.672	14.442	0.230	0.531	4.32	-0.171	2.05
2/5/2013	12:17:00	14.671	14.438	0.233	0.538	4.32	-0.178	2.13
2/5/2013	12:32:00	14.664	14.432	0.232	0.535	4.32	-0.175	2.10
2/5/2013	12:47:00	14.662	14.430	0.232	0.535	4.32	-0.175	2.10
2/5/2013	13:02:00	14.656	14.423	0.233	0.538	4.32	-0.178	2.13
2/5/2013	13:17:00	14.654	14.424	0.230	0.531	4.32	-0.171	2.05
2/5/2013	13:32:00	14.645	14.416	0.229	0.528	4.32	-0.168	2.02
2/5/2013	13:47:00	14.643	14.414	0.229	0.528	4.32	-0.168	2.02
2/5/2013	14:02:00	14.642	14.408	0.234	0.540	4.32	-0.180	2.16
2/5/2013	14:17:00	14.636	14.412	0.224	0.517	4.32	-0.157	1.88
2/5/2013	14:32:00	14.641	14.409	0.232	0.535	4.32	-0.175	2.10
2/5/2013	14:47:00	14.638	14.405	0.233	0.538	4.32	-0.178	2.13
2/5/2013	15:02:00	14.635	14.410	0.225	0.519	4.32	-0.159	1.91
2/5/2013	15:17:00	14.630	14.401	0.229	0.528	4.32	-0.168	2.02
2/5/2013	15:32:00	14.632	14.411	0.221	0.510	4.32	-0.150	1.80
2/5/2013	15:47:00	14.627	14.409	0.218	0.503	4.32	-0.143	1.72
2/5/2013	16:02:00	14.626	14.407	0.219	0.505	4.32	-0.145	1.74
2/5/2013	16:17:00	14.633	14.404	0.229	0.528	4.32	-0.168	2.02
2/5/2013	16:32:00	14.633	14.411	0.222	0.512	4.32	-0.152	1.83
2/5/2013	16:47:00	14.638	14.407	0.231	0.533	4.32	-0.173	2.08
2/5/2013	17:02:00	14.635	14.407	0.228	0.526	4.32	-0.166	1.99
2/5/2013	17:17:00	14.637	14.409	0.228	0.526	4.32	-0.166	1.99
2/5/2013	17:32:00	14.634	14.409	0.225	0.519	4.32	-0.159	1.91
2/5/2013	17:47:00	14.638	14.408	0.230	0.531	4.32	-0.171	2.05
2/5/2013	18:02:00	14.633	14.410	0.223	0.514	4.32	-0.154	1.85
2/5/2013	18:17:00	14.641	14.414	0.227	0.524	4.32	-0.164	1.96
2/5/2013	18:32:00	14.643	14.414	0.229	0.528	4.32	-0.168	2.02
2/5/2013	18:47:00	14.647	14.418	0.229	0.528	4.32	-0.168	2.02
2/5/2013	19:02:00	14.647	14.424	0.223	0.514	4.32	-0.154	1.85
2/5/2013	19:17:00	14.656	14.427	0.229	0.528	4.32	-0.168	2.02
2/5/2013	19:32:00	14.659	14.424	0.235	0.542	4.32	-0.182	2.19
2/5/2013	19:47:00	14.657	14.425	0.232	0.535	4.32	-0.175	2.10
2/5/2013	20:02:00	14.663	14.431	0.232	0.535	4.32	-0.175	2.10
2/5/2013	20:17:00	14.665	14.432	0.233	0.538	4.32	-0.178	2.13
2/5/2013	20:32:00	14.660	14.432	0.228	0.526	4.32	-0.166	1.99
2/5/2013	20:47:00	14.658	14.434	0.224	0.517	4.32	-0.157	1.88
2/5/2013	21:02:00	14.665	14.434	0.231	0.533	4.32	-0.173	2.08
2/5/2013	21:17:00	14.674	14.436	0.238	0.549	4.32	-0.189	2.27
2/5/2013	21:32:00	14.672	14.436	0.236	0.544	4.32	-0.184	2.21
2/5/2013	21:47:00	14.667	14.445	0.222	0.512	4.32	-0.152	1.83
2/5/2013	22:02:00	14.672	14.446	0.226	0.521	4.32	-0.161	1.94
2/5/2013	22:17:00	14.676	14.430	0.246	0.568	4.32	-0.208	2.49
2/5/2013	22:32:00	14.679	14.446	0.233	0.538	4.32	-0.178	2.13
2/5/2013	22:47:00	14.679	14.451	0.228	0.526	4.32	-0.166	1.99
2/5/2013	23:02:00	14.675	14.448	0.227	0.524	4.32	-0.164	1.96
2/5/2013	23:17:00	14.677	14.449	0.228	0.526	4.32	-0.166	1.99
2/5/2013	23:32:00	14.682	14.451	0.231	0.533	4.32	-0.173	2.08
2/5/2013	23:47:00	14.680	14.448	0.232	0.535	4.32	-0.175	2.10
2/6/2013	0:02:00	14.680	14.450	0.230	0.531	4.32	-0.171	2.05
2/6/2013	0:17:00	14.688	14.456	0.232	0.535	4.32	-0.175	2.10
2/6/2013	0:32:00	14.682	14.452	0.230	0.531	4.32	-0.171	2.05
2/6/2013	0:47:00	14.682	14.448	0.234	0.540	4.32	-0.180	2.16
2/6/2013	1:02:00	14.680	14.451	0.229	0.528	4.32	-0.168	2.02
2/6/2013	1:17:00	14.685	14.451	0.234	0.540	4.32	-0.180	2.16
2/6/2013	1:32:00	14.683	14.452	0.231	0.533	4.32	-0.173	2.08
2/6/2013	1:47:00	14.686	14.454	0.232	0.535	4.32	-0.175	2.10
2/6/2013	2:02:00	14.681	14.457	0.224	0.517	4.32	-0.157	1.88
2/6/2013	2:17:00	14.684	14.455	0.229	0.528	4.32	-0.168	2.02
2/6/2013	2:32:00	14.684	14.456	0.228	0.526	4.32	-0.166	1.99
2/6/2013	2:47:00	14.687	14.461	0.226	0.521	4.32	-0.161	1.94
2/6/2013	3:02:00	14.687	14.459	0.228	0.526	4.32	-0.166	1.99
2/6/2013	3:17:00	14.686	14.460	0.226	0.521	4.32	-0.161	1.94
2/6/2013	3:32:00	14.692	14.463	0.229	0.528	4.32	-0.168	2.02
2/6/2013	3:47:00	14.694	14.466	0.228	0.526	4.32	-0.166	1.99
2/6/2013	4:02:00	14.694	14.467	0.227	0.524	4.32	-0.164	1.96
2/6/2013	4:17:00	14.692	14.473	0.219	0.505	4.32	-0.145	1.74
2/6/2013	4:32:00	14.698	14.471	0.227	0.524	4.32	-0.164	1.96
2/6/2013	4:47:00	14.704	14.475	0.229	0.528	4.32	-0.168	2.02
2/6/2013	5:02:00	14.704	14.476	0.228	0.526	4.32	-0.166	1.99
2/6/2013	5:17:00	14.706	14.482	0.224	0.517	4.32	-0.157	1.88
2/6/2013	5:32:00	14.711	14.486	0.225	0.519	4.32	-0.159	1.91
2/6/2013	5:47:00	14.705	14.485	0.220	0.508	4.32	-0.148	1.77
2/6/2013	6:02:00	14.710	14.486	0.224	0.517	4.32	-0.157	1.88
2/6/2013	6:17:00	14.712	14.493	0.219	0.505	4.32	-0.145	1.74
2/6/2013	6:32:00	14.714	14.496	0.218	0.503	4.32	-0.143	1.72
2/6/2013	6:47:00	14.712	14.498	0.214	0.494	4.32	-0.134	1.60
2/6/2013	7:02:00	14.724	14.504	0.220	0.508	4.32	-0.148	1.77
2/6/2013	7:17:00	14.730	14.506	0.224	0.517	4.32	-0.157	1.88
2/6/2013	7:32:00	14.724	14.514	0.210	0.484	4.32	-0.124	1.49
2/6/2013	7:47:00	14.728	14.502	0.226	0.521	4.32	-0.161	1.94
2/6/2013	8:02:00	14.739	14.525	0.214	0.494	4.32	-0.134	1.60
2/6/2013	8:17:00	14.740	14.519	0.221	0.510	4.32	-0.150	1.80
2/6/2013	8:32:00	14.737	14.520	0.217	0.501	4.32	-0.141	1.69
2/6/2013	8:47:00	14.745	14.522	0.223	0.514	4.32	-0.154	1.85
2/6/2013	9:02:00	14.755	14.526	0.229	0.528	4.32	-0.168	2.02
2/6/2013	9:17:00	14.751	14.524	0.227	0.524	4.32	-0.164	1.96
2/6/2013	9:32:00	14.756	14.531	0.225	0.519	4.32	-0.159	1.91
2/6/2013	9:47:00	14.759	14.531	0.228	0.526	4.32	-0.166	1.99
2/6/2013	10:02:00	14.759	14.540	0.219	0.505	4.32	-0.145	1.74
2/6/2013	10:17:00	14.763	14.532	0.231	0.533	4.32	-0.173	2.08
2/6/2013	10:32:00	14.763	14.536	0.227	0.524	4.32	-0.164	1.96
2/6/2013	10:47:00	14.762	14.535	0.227	0.524	4.32	-0.164	1.96
2/6/2013	11:02:00	14.760	14.537	0.223	0.514	4.32	-0.154	1.85
2/6/2013	11:17:00	14.768	14.538	0.230	0.531	4.32	-0.171	2.05
2/6/2013	11:32:00	14.762	14.540	0.222	0.512	4.32	-0.152	1.83
2/6/2013	11:47:00	14.765	14.532	0.233	0.538	4.32	-0.178	2.13
2/6/2013	12:02:00	14.759	14.531	0.228	0.526	4.32	-0.166	1.99
2/6/2013	12:17:00	14.764	14.531	0.233	0.538	4.32	-0.178	2.13
2/6/2013	12:32:00	14.754	14.532	0.222	0.512	4.32	-0.152	1.83
2/6/2013	12:47:00	14.761	14.524	0.237	0.547	4.32	-0.187	2.24
2/6/2013	13:02:00	14.755	14.527	0.228	0.526	4.32	-0.166	1.99
2/6/2013	13:17:00	14.753	14.522	0.231	0.533	4.32	-0.173	2.08
2/6/2013	13:32:00	14.750	14.520	0.230	0.531	4.32	-0.171	2.05
2/6/2013	13:47:00	14.751	14.516	0.235	0.542	4.32	-0.182	2.19
2/6/2013	14:02:00	14.743	14.518	0.225	0.519	4.32	-0.159	1.91
2/6/2013	14:17:00	14.742	14.514	0.228	0.526	4.32	-0.166	1.99
2/6/2013	14:32:00	14.740	14.516	0.224	0.517	4.32	-0.157	1.88
2/6/2013	14:47:00	14.741	14.514	0.227	0.524	4.32	-0.164	1.96
2/6/2013	15:02:00	14.741	14.515	0.226	0.521	4.32	-0.161	1.94
2/6/2013	15:17:00	14.742	14.512	0.230	0.531	4.32	-0.171	2.05
2/6/2013	15:32:00	14.742	14.514	0.228	0.526	4.32	-0.166	1.99
2/6/2013	15:47:00	14.743	14.518	0.225	0.519	4.32	-0.159	1.91
2/6/2013	16:02:00	14.746	14.521	0.225	0.519	4.32	-0.159	1.91
2/6/2013	16:17:00	14.742	14.515	0.227	0.524	4.32	-0.164	1.96
2/6/2013	16:32:00	14.738	14.517	0.221	0.510	4.32	-0.150	1.80
2/6/2013	16:47:00	14.748	14.515	0.233	0.538	4.32	-0.178	2.13
2/6/2013	17:02:00	14.744	14.519	0.225	0.519	4.32	-0.159	1.91
2/6/2013	17:17:00	14.748	14.525	0.223	0.514	4.32	-0.154	1.85
2/6/2013	17:32:00	14.752	14.521	0.231	0.533	4.32	-0.173	2.08
2/6/2013	17:47:00	14.751	14.523	0.228	0.526	4.32	-0.166	1.99
2/6/2013	18:02:00	14.750	14.524	0.226	0.521	4.32	-0.161	1.94

2/6/2013	18:17:00	14.757	14.528	0.229	0.528	4.32	-0.168	2.02	
2/6/2013	18:32:00	14.755	14.529	0.226	0.521	4.32	-0.161	1.94	
2/6/2013	18:47:00	14.761	14.533	0.228	0.526	4.32	-0.166	1.99	
2/6/2013	19:02:00	14.758	14.534	0.224	0.517	4.32	-0.157	1.88	
2/6/2013	19:17:00	14.761	14.534	0.227	0.524	4.32	-0.164	1.96	
2/6/2013	19:32:00	14.765	14.539	0.226	0.521	4.32	-0.161	1.94	
2/6/2013	19:47:00	14.769	14.541	0.228	0.526	4.32	-0.166	1.99	
2/6/2013	20:02:00	14.767	14.543	0.224	0.517	4.32	-0.157	1.88	
2/6/2013	20:17:00	14.769	14.545	0.224	0.517	4.32	-0.157	1.88	
2/6/2013	20:32:00	14.767	14.551	0.216	0.498	4.32	-0.138	1.66	
2/6/2013	20:47:00	14.764	14.550	0.214	0.494	4.32	-0.134	1.60	
2/6/2013	21:02:00	14.768	14.548	0.220	0.508	4.32	-0.148	1.77	
2/6/2013	21:17:00	14.774	14.546	0.228	0.526	4.32	-0.166	1.99	
2/6/2013	21:32:00	14.770	14.548	0.222	0.512	4.32	-0.152	1.83	
2/6/2013	21:47:00	14.774	14.551	0.223	0.514	4.32	-0.154	1.85	
2/6/2013	22:02:00	14.777	14.553	0.224	0.517	4.32	-0.157	1.88	
2/6/2013	22:17:00	14.781	14.560	0.221	0.510	4.32	-0.150	1.80	
2/6/2013	22:32:00	14.781	14.573	0.208	0.480	4.32	-0.120	1.44	
2/6/2013	22:47:00	14.791	14.566	0.225	0.519	4.32	-0.159	1.91	
2/6/2013	23:02:00	14.791	14.564	0.227	0.524	4.32	-0.164	1.96	
2/6/2013	23:17:00	14.786	14.558	0.228	0.526	4.32	-0.166	1.99	
2/6/2013	23:32:00	14.783	14.559	0.224	0.517	4.32	-0.157	1.88	
2/6/2013	23:47:00	14.789	14.566	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	0:02:00	14.791	14.567	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	0:17:00	14.786	14.559	0.227	0.524	4.32	-0.164	1.96	
2/7/2013	0:32:00	14.780	14.558	0.222	0.512	4.32	-0.152	1.83	
2/7/2013	0:47:00	14.781	14.563	0.218	0.503	4.32	-0.143	1.72	
2/7/2013	1:02:00	14.781	14.561	0.220	0.508	4.32	-0.148	1.77	
2/7/2013	1:17:00	14.786	14.561	0.225	0.519	4.32	-0.159	1.91	
2/7/2013	1:32:00	14.785	14.562	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	1:47:00	14.789	14.564	0.225	0.519	4.32	-0.159	1.91	
2/7/2013	2:02:00	14.786	14.563	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	2:17:00	14.785	14.565	0.220	0.508	4.32	-0.148	1.77	
2/7/2013	2:32:00	14.785	14.560	0.225	0.519	4.32	-0.159	1.91	
2/7/2013	2:47:00	14.780	14.560	0.220	0.508	4.32	-0.148	1.77	
2/7/2013	3:02:00	14.784	14.564	0.220	0.508	4.32	-0.148	1.77	
2/7/2013	3:17:00	14.786	14.562	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	3:32:00	14.786	14.562	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	3:47:00	14.785	14.565	0.220	0.508	4.32	-0.148	1.77	
2/7/2013	4:02:00	14.781	14.563	0.218	0.503	4.32	-0.143	1.72	
2/7/2013	4:17:00	14.783	14.560	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	4:32:00	14.787	14.573	0.214	0.494	4.32	-0.134	1.60	
2/7/2013	4:47:00	14.793	14.572	0.221	0.510	4.32	-0.150	1.80	
2/7/2013	5:02:00	14.795	14.571	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	5:17:00	14.800	14.574	0.226	0.521	4.32	-0.161	1.94	
2/7/2013	5:32:00	14.798	14.578	0.220	0.508	4.32	-0.148	1.77	
2/7/2013	5:47:00	14.801	14.578	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	6:02:00	14.800	14.577	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	6:17:00	14.790	14.573	0.217	0.501	4.32	-0.141	1.69	
2/7/2013	6:32:00	14.793	14.583	0.210	0.484	4.32	-0.124	1.49	
2/7/2013	6:47:00	14.798	14.575	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	7:02:00	14.792	14.580	0.212	0.489	4.32	-0.129	1.55	
2/7/2013	7:17:00	14.796	14.583	0.213	0.491	4.32	-0.131	1.58	
2/7/2013	7:32:00	14.809	14.585	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	7:47:00	14.796	14.578	0.218	0.503	4.32	-0.143	1.72	
2/7/2013	8:02:00	14.800	14.586	0.214	0.494	4.32	-0.134	1.60	
2/7/2013	8:17:00	14.808	14.587	0.221	0.510	4.32	-0.150	1.80	
2/7/2013	8:32:00	14.807	14.581	0.226	0.521	4.32	-0.161	1.94	
2/7/2013	8:47:00	14.806	14.579	0.227	0.524	4.32	-0.164	1.96	
2/7/2013	9:02:00	14.804	14.580	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	9:17:00	14.806	14.583	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	9:32:00	14.800	14.584	0.216	0.498	4.32	-0.138	1.66	
2/7/2013	9:47:00	14.802	14.575	0.227	0.524	4.32	-0.164	1.96	
2/7/2013	10:02:00	14.796	14.569	0.227	0.524	4.32	-0.164	1.96	
2/7/2013	10:17:00	14.794	14.573	0.221	0.510	4.32	-0.150	1.80	
2/7/2013	10:32:00	14.791	14.567	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	10:47:00	14.789	14.570	0.219	0.505	4.32	-0.145	1.74	
2/7/2013	11:02:00	14.790	14.566	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	11:17:00	14.783	14.563	0.220	0.508	4.32	-0.148	1.77	
2/7/2013	11:32:00	14.789	14.565	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	11:47:00	14.782	14.566	0.216	0.498	4.32	-0.138	1.66	
2/7/2013	12:02:00	14.790	14.562	0.228	0.526	4.32	-0.166	1.99	
2/7/2013	12:17:00	14.783	14.554	0.229	0.528	4.32	-0.168	2.02	
2/7/2013	12:32:00	14.781	14.552	0.229	0.528	4.32	-0.168	2.02	
2/7/2013	12:47:00	14.776	14.538	0.238	0.549	4.32	-0.189	2.27	
2/7/2013	13:02:00	14.764	14.528	0.236	0.544	4.32	-0.184	2.21	
2/7/2013	13:17:00	14.760	14.533	0.227	0.524	4.32	-0.164	1.96	
2/7/2013	13:32:00	14.757	14.533	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	13:47:00	14.756	14.537	0.219	0.505	4.32	-0.145	1.74	
2/7/2013	14:02:00	14.756	14.533	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	14:17:00	14.753	14.532	0.221	0.510	4.32	-0.150	1.80	
2/7/2013	14:32:00	14.750	14.526	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	14:47:00	14.751	14.525	0.226	0.521	4.32	-0.161	1.94	
2/7/2013	15:02:00	14.749	14.528	0.221	0.510	4.32	-0.150	1.80	
2/7/2013	15:17:00	14.746	14.521	0.225	0.519	4.32	-0.159	1.91	
2/7/2013	15:32:00	14.743	14.516	0.227	0.524	4.32	-0.164	1.96	
2/7/2013	15:47:00	14.743	14.510	0.233	0.538	4.32	-0.178	2.13	
2/7/2013	16:02:00	14.741	14.515	0.226	0.521	4.32	-0.161	1.94	
2/7/2013	16:17:00	14.735	14.516	0.219	0.505	4.32	-0.145	1.74	
2/7/2013	16:32:00	14.734	14.503	0.231	0.533	4.32	-0.173	2.08	
2/7/2013	16:47:00	14.728	14.499	0.229	0.528	4.32	-0.168	2.02	
2/7/2013	17:02:00	14.723	14.494	0.229	0.528	4.32	-0.168	2.02	
2/7/2013	17:17:00	14.718	14.493	0.225	0.519	4.32	-0.159	1.91	
2/7/2013	17:32:00	14.715	14.489	0.226	0.521	4.32	-0.161	1.94	
2/7/2013	17:47:00	14.713	14.483	0.230	0.531	4.32	-0.171	2.05	
2/7/2013	18:02:00	14.708	14.484	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	18:17:00	14.717	14.485	0.232	0.535	4.32	-0.175	2.10	
2/7/2013	18:32:00	14.707	14.483	0.224	0.517	4.32	-0.157	1.88	
2/7/2013	18:47:00	14.706	14.483	0.223	0.514	4.32	-0.154	1.85	
2/7/2013	19:02:00	14.706	14.478	0.228	0.526	4.32	-0.166	1.99	
2/7/2013	19:17:00	14.705	14.477	0.228	0.526	4.32	-0.166	1.99	0.01
2/7/2013	19:32:00	14.709	14.476	0.233	0.538	4.32	-0.178	2.13	
2/7/2013	19:47:00	14.705	14.468	0.237	0.547	4.32	-0.187	2.24	
2/7/2013	20:02:00	14.701	14.470	0.231	0.533	4.32	-0.173	2.08	0.02
2/7/2013	20:17:00	14.693	14.464	0.229	0.528	4.32	-0.168	2.02	0.03
2/7/2013	20:32:00	14.696	14.455	0.241	0.556	4.32	-0.196	2.35	
2/7/2013	20:47:00	14.685	14.443	0.242	0.558	4.32	-0.198	2.38	
2/7/2013	21:02:00	14.684	14.459	0.225	0.519	4.32	-0.159	1.91	0.04
2/7/2013	21:17:00	14.687	14.457	0.230	0.531	4.32	-0.171	2.05	0.05
2/7/2013	21:32:00	14.685	14.450	0.235	0.542	4.32	-0.182	2.19	0.06
2/7/2013	21:47:00	14.685	14.452	0.233	0.538	4.32	-0.178	2.13	0.07
2/7/2013	22:02:00	14.684	14.446	0.238	0.549	4.32	-0.189	2.27	
2/7/2013	22:17:00	14.688	14.442	0.246	0.568	4.32	-0.208	2.49	0.08
2/7/2013	22:32:00	14.692	14.442	0.250	0.577	4.32	-0.217	2.60	0.09
2/7/2013	22:47:00	14.686	14.437	0.249	0.574	4.32	-0.214	2.57	0.10
2/7/2013	23:02:00	14.691	14.428	0.263	0.607	4.32	-0.247	2.96	0.12
2/7/2013	23:17:00	14.703	14.420	0.283	0.653	4.32	-0.293	3.51	0.16
2/7/2013	23:32:00	14.722	14.418	0.304	0.701	4.32	-0.341	4.10	0.18
2/7/2013	23:47:00	14.757	14.416	0.341	0.787	4.32	-0.427	5.12	0.22
2/8/2013	0:02:00	14.797	14.417	0.380	0.877	4.32	-0.517	6.20	0.25
2/8/2013	0:17:00	14.803	14.405	0.398	0.918	4.32	-0.558	6.70	0.26
2/8/2013	0:32:00	14.804	14.403	0.401	0.925	4.32	-0.565	6.78	0.28
2/8/2013	0:47:00	14.804	14.401	0.403	0.930	4.32	-0.570	6.84	0.31
2/8/2013	1:02:00	14.800	14.399	0.401	0.925	4.32	-0.565	6.78	0.01
2/8/2013	1:17:00	14.802	14.398	0.404	0.932	4.32	-0.572	6.86	0.02
2/8/2013	1:32:00	14.812	14.403	0.409	0.944	4.32	-0.584	7.00	
2/8/2013	1:47:00	14.811	14.395	0.416	0.960	4.32	-0.600	7.20	0.03
2/8/2013	2:02:00	14.800	14.380	0.420	0.969	4.32	-0.609	7.31	
2/8/2013	2:17:00	14.790	14.379	0.411	0.948	4.32	-0.588	7.06	
2/8/2013	2:32:00	14.780	14.395	0.385	0.888	4.32	-0.528	6.34	
2/8/2013	2:47:00	14.765	14.369	0.396	0.914	4.32	-0.554	6.64	
2/8/2013	3:02:00	14.755	14.385	0.370	0.854	4.32	-0.494	5.92	
2/8/2013	3:17:00	14.748	14.379	0.369	0.851	4.32	-0.491	5.90	

2/8/2013	3:32:00	14.746	14.373	0.373	0.861	4.32	-0.501	6.01	
2/8/2013	3:47:00	14.736	14.379	0.357	0.824	4.32	-0.464	5.56	
2/8/2013	4:02:00	14.727	14.390	0.337	0.777	4.32	-0.417	5.01	
2/8/2013	4:17:00	14.720	14.398	0.322	0.743	4.32	-0.383	4.59	
2/8/2013	4:32:00	14.718	14.391	0.327	0.754	4.32	-0.394	4.73	
2/8/2013	4:47:00	14.717	14.394	0.323	0.745	4.32	-0.385	4.62	
2/8/2013	5:02:00	14.711	14.388	0.323	0.745	4.32	-0.385	4.62	
2/8/2013	5:17:00	14.716	14.382	0.334	0.771	4.32	-0.411	4.93	
2/8/2013	5:32:00	14.708	14.397	0.311	0.717	4.32	-0.357	4.29	
2/8/2013	5:47:00	14.699	14.404	0.295	0.681	4.32	-0.321	3.85	
2/8/2013	6:02:00	14.701	14.400	0.301	0.694	4.32	-0.334	4.01	
2/8/2013	6:17:00	14.700	14.393	0.307	0.708	4.32	-0.348	4.18	
2/8/2013	6:32:00	14.702	14.402	0.300	0.692	4.32	-0.332	3.99	0.04
2/8/2013	6:47:00	14.702	14.400	0.302	0.697	4.32	-0.337	4.04	
2/8/2013	7:02:00	14.702	14.409	0.293	0.676	4.32	-0.316	3.79	
2/8/2013	7:17:00	14.702	14.403	0.299	0.690	4.32	-0.330	3.96	
2/8/2013	7:32:00	14.698	14.407	0.291	0.671	4.32	-0.311	3.74	
2/8/2013	7:47:00	14.694	14.411	0.283	0.653	4.32	-0.293	3.51	
2/8/2013	8:02:00	14.703	14.412	0.291	0.671	4.32	-0.311	3.74	
2/8/2013	8:17:00	14.700	14.416	0.284	0.655	4.32	-0.295	3.54	
2/8/2013	8:32:00	14.700	14.419	0.281	0.648	4.32	-0.288	3.46	
2/8/2013	8:47:00	14.706	14.425	0.281	0.648	4.32	-0.288	3.46	
2/8/2013	9:02:00	14.707	14.417	0.290	0.669	4.32	-0.309	3.71	
2/8/2013	9:17:00	14.705	14.413	0.292	0.674	4.32	-0.314	3.76	
2/8/2013	9:32:00	14.709	14.429	0.280	0.646	4.32	-0.286	3.43	
2/8/2013	9:47:00	14.706	14.428	0.278	0.641	4.32	-0.281	3.38	
2/8/2013	10:02:00	14.707	14.427	0.280	0.646	4.32	-0.286	3.43	
2/8/2013	10:17:00	14.708	14.433	0.275	0.634	4.32	-0.274	3.29	
2/8/2013	10:32:00	14.708	14.431	0.277	0.639	4.32	-0.279	3.35	
2/8/2013	10:47:00	14.710	14.432	0.278	0.641	4.32	-0.281	3.38	
2/8/2013	11:02:00	14.712	14.428	0.284	0.655	4.32	-0.295	3.54	
2/8/2013	11:17:00	14.701	14.422	0.279	0.644	4.32	-0.284	3.40	
2/8/2013	11:32:00	14.696	14.417	0.279	0.644	4.32	-0.284	3.40	
2/8/2013	11:47:00	14.696	14.419	0.277	0.639	4.32	-0.279	3.35	
2/8/2013	12:02:00	14.694	14.415	0.279	0.644	4.32	-0.284	3.40	
2/8/2013	12:17:00	14.688	14.416	0.272	0.628	4.32	-0.268	3.21	
2/8/2013	12:32:00	14.684	14.411	0.273	0.630	4.32	-0.270	3.24	
2/8/2013	12:47:00	14.681	14.405	0.276	0.637	4.32	-0.277	3.32	
2/8/2013	13:02:00	14.675	14.403	0.272	0.628	4.32	-0.268	3.21	
2/8/2013	13:17:00	14.681	14.401	0.280	0.646	4.32	-0.286	3.43	
2/8/2013	13:32:00	14.666	14.396	0.270	0.623	4.32	-0.263	3.15	
2/8/2013	13:47:00	14.670	14.397	0.273	0.630	4.32	-0.270	3.24	
2/8/2013	14:02:00	14.662	14.395	0.267	0.616	4.32	-0.256	3.07	
2/8/2013	14:17:00	14.657	14.390	0.267	0.616	4.32	-0.256	3.07	
2/8/2013	14:32:00	14.663	14.384	0.279	0.644	4.32	-0.284	3.40	
2/8/2013	14:47:00	14.652	14.388	0.264	0.609	4.32	-0.249	2.99	
2/8/2013	15:02:00	14.655	14.388	0.267	0.616	4.32	-0.256	3.07	
2/8/2013	15:17:00	14.662	14.386	0.276	0.637	4.32	-0.277	3.32	
2/8/2013	15:32:00	14.656	14.388	0.268	0.618	4.32	-0.258	3.10	
2/8/2013	15:47:00	14.655	14.387	0.268	0.618	4.32	-0.258	3.10	
2/8/2013	16:02:00	14.662	14.390	0.272	0.628	4.32	-0.268	3.21	
2/8/2013	16:17:00	14.659	14.389	0.270	0.623	4.32	-0.263	3.15	
2/8/2013	16:32:00	14.659	14.392	0.267	0.616	4.32	-0.256	3.07	
2/8/2013	16:47:00	14.660	14.397	0.263	0.607	4.32	-0.247	2.96	
2/8/2013	17:02:00	14.665	14.399	0.266	0.614	4.32	-0.254	3.04	
2/8/2013	17:17:00	14.663	14.403	0.260	0.600	4.32	-0.240	2.88	
2/8/2013	17:32:00	14.676	14.411	0.265	0.611	4.32	-0.251	3.02	
2/8/2013	17:47:00	14.677	14.413	0.264	0.609	4.32	-0.249	2.99	
2/8/2013	18:02:00	14.681	14.420	0.261	0.602	4.32	-0.242	2.91	
2/8/2013	18:17:00	14.681	14.418	0.263	0.607	4.32	-0.247	2.96	
2/8/2013	18:32:00	14.685	14.418	0.267	0.616	4.32	-0.256	3.07	
2/8/2013	18:47:00	14.693	14.431	0.262	0.604	4.32	-0.244	2.93	
2/8/2013	19:02:00	14.695	14.432	0.263	0.607	4.32	-0.247	2.96	
2/8/2013	19:17:00	14.697	14.435	0.262	0.604	4.32	-0.244	2.93	
2/8/2013	19:32:00	14.700	14.435	0.265	0.611	4.32	-0.251	3.02	
2/8/2013	19:47:00	14.702	14.439	0.263	0.607	4.32	-0.247	2.96	
2/8/2013	20:02:00	14.699	14.441	0.258	0.595	4.32	-0.235	2.82	
2/8/2013	20:17:00	14.707	14.449	0.258	0.595	4.32	-0.235	2.82	
2/8/2013	20:32:00	14.714	14.450	0.264	0.609	4.32	-0.249	2.99	
2/8/2013	20:47:00	14.713	14.456	0.257	0.593	4.32	-0.233	2.79	
2/8/2013	21:02:00	14.716	14.456	0.260	0.600	4.32	-0.240	2.88	
2/8/2013	21:17:00	14.724	14.467	0.257	0.593	4.32	-0.233	2.79	
2/8/2013	21:32:00	14.728	14.469	0.259	0.598	4.32	-0.238	2.85	
2/8/2013	21:47:00	14.732	14.473	0.259	0.598	4.32	-0.238	2.85	
2/8/2013	22:02:00	14.740	14.483	0.257	0.593	4.32	-0.233	2.79	
2/8/2013	22:17:00	14.743	14.495	0.248	0.572	4.32	-0.212	2.55	
2/8/2013	22:32:00	14.745	14.508	0.237	0.547	4.32	-0.187	2.24	
2/8/2013	22:47:00	14.753	14.500	0.253	0.584	4.32	-0.224	2.68	
2/8/2013	23:02:00	14.752	14.499	0.253	0.584	4.32	-0.224	2.68	
2/8/2013	23:17:00	14.758	14.505	0.253	0.584	4.32	-0.224	2.68	
2/8/2013	23:32:00	14.760	14.503	0.257	0.593	4.32	-0.233	2.79	
2/8/2013	23:47:00	14.765	14.506	0.259	0.598	4.32	-0.238	2.85	
2/9/2013	0:02:00	14.766	14.504	0.262	0.604	4.32	-0.244	2.93	
2/9/2013	0:17:00	14.765	14.510	0.255	0.588	4.32	-0.228	2.74	
2/9/2013	0:32:00	14.767	14.515	0.252	0.581	4.32	-0.221	2.66	
2/9/2013	0:47:00	14.768	14.514	0.254	0.586	4.32	-0.226	2.71	
2/9/2013	1:02:00	14.767	14.511	0.256	0.591	4.32	-0.231	2.77	
2/9/2013	1:17:00	14.763	14.513	0.250	0.577	4.32	-0.217	2.60	
2/9/2013	1:32:00	14.765	14.513	0.252	0.581	4.32	-0.221	2.66	
2/9/2013	1:47:00	14.770	14.512	0.258	0.595	4.32	-0.235	2.82	
2/9/2013	2:02:00	14.766	14.506	0.260	0.600	4.32	-0.240	2.88	
2/9/2013	2:17:00	14.766	14.514	0.252	0.581	4.32	-0.221	2.66	
2/9/2013	2:32:00	14.766	14.521	0.245	0.565	4.32	-0.205	2.46	
2/9/2013	2:47:00	14.770	14.519	0.251	0.579	4.32	-0.219	2.63	
2/9/2013	3:02:00	14.772	14.524	0.248	0.572	4.32	-0.212	2.55	
2/9/2013	3:17:00	14.772	14.523	0.249	0.574	4.32	-0.214	2.57	
2/9/2013	3:32:00	14.782	14.527	0.255	0.588	4.32	-0.228	2.74	
2/9/2013	3:47:00	14.773	14.529	0.244	0.563	4.32	-0.203	2.43	
2/9/2013	4:02:00	14.792	14.533	0.259	0.598	4.32	-0.238	2.85	
2/9/2013	4:17:00	14.796	14.531	0.265	0.611	4.32	-0.251	3.02	
2/9/2013	4:32:00	14.786	14.536	0.250	0.577	4.32	-0.217	2.60	
2/9/2013	4:47:00	14.786	14.532	0.254	0.586	4.32	-0.226	2.71	
2/9/2013	5:02:00	14.790	14.540	0.250	0.577	4.32	-0.217	2.60	
2/9/2013	5:17:00	14.785	14.538	0.247	0.570	4.32	-0.210	2.52	
2/9/2013	5:32:00	14.790	14.549	0.241	0.556	4.32	-0.196	2.35	
2/9/2013	5:47:00	14.800	14.546	0.254	0.586	4.32	-0.226	2.71	
2/9/2013	6:02:00	14.803	14.555	0.248	0.572	4.32	-0.212	2.55	
2/9/2013	6:17:00	14.806	14.553	0.253	0.584	4.32	-0.224	2.68	
2/9/2013	6:32:00	14.806	14.556	0.250	0.577	4.32	-0.217	2.60	
2/9/2013	6:47:00	14.810	14.563	0.247	0.570	4.32	-0.210	2.52	
2/9/2013	7:02:00	14.813	14.565	0.248	0.572	4.32	-0.212	2.55	
2/9/2013	7:17:00	14.823	14.575	0.248	0.572	4.32	-0.212	2.55	
2/9/2013	7:32:00	14.821	14.581	0.240	0.554	4.32	-0.194	2.32	
2/9/2013	7:47:00	14.823	14.573	0.250	0.577	4.32	-0.217	2.60	
2/9/2013	8:02:00	14.829	14.588	0.241	0.556	4.32	-0.196	2.35	
2/9/2013	8:17:00	14.832	14.576	0.256	0.591	4.32	-0.231	2.77	
2/9/2013	8:32:00	14.832	14.582	0.250	0.577	4.32	-0.217	2.60	
2/9/2013	8:47:00	14.837	14.583	0.254	0.586	4.32	-0.226	2.71	
2/9/2013	9:02:00	14.844	14.589	0.255	0.588	4.32	-0.228	2.74	
2/9/2013	9:17:00	14.843	14.587	0.256	0.591	4.32	-0.231	2.77	
2/9/2013	9:32:00	14.848	14.596	0.252	0.581	4.32	-0.221	2.66	
2/9/2013	9:47:00	14.859	14.592	0.267	0.616	4.32	-0.256	3.07	
2/9/2013	10:02:00	14.855	14.595	0.260	0.600	4.32	-0.240	2.88	
2/9/2013	10:17:00	14.848	14.600	0.248	0.572	4.32	-0.212	2.55	
2/9/2013	10:32:00	14.851	14.601	0.250	0.577	4.32	-0.217	2.60	
2/9/2013	10:47:00	14.852	14.600	0.252	0.581	4.32	-0.221	2.66	
2/9/2013	11:02:00	14.848	14.602	0.246	0.568	4.32	-0.208	2.49	
2/9/2013	11:17:00	14.855	14.600	0.255	0.588	4.32	-0.228	2.74	
2/9/2013	11:32:00	14.851	14.599	0.252	0.581	4.32	-0.221	2.66	
2/9/2013	11:47:00	14.850	14.595	0.255	0.588	4.32	-0.228	2.74	
2/9/2013	12:02:00	14.851	14.593	0.258	0.595	4.32	-0.235	2.82	
2/9/2013	12:17:00	14.850	14.593	0.257	0.593	4.32	-0.233	2.79	
2/9/2013	12:32:00	14.846	14.590	0.256	0.591	4.32	-0.231	2.77	

2/9/2013	12:47:00	14.844	14.592	0.252	0.581	4.32	-0.221	2.66
2/9/2013	13:02:00	14.846	14.583	0.263	0.607	4.32	-0.247	2.96
2/9/2013	13:17:00	14.839	14.592	0.247	0.570	4.32	-0.210	2.52
2/9/2013	13:32:00	14.839	14.586	0.253	0.584	4.32	-0.224	2.68
2/9/2013	13:47:00	14.833	14.585	0.248	0.572	4.32	-0.212	2.55
2/9/2013	14:02:00	14.830	14.582	0.248	0.572	4.32	-0.212	2.55
2/9/2013	14:17:00	14.830	14.584	0.246	0.568	4.32	-0.208	2.49
2/9/2013	14:32:00	14.829	14.577	0.252	0.581	4.32	-0.221	2.66
2/9/2013	14:47:00	14.823	14.575	0.248	0.572	4.32	-0.212	2.55
2/9/2013	15:02:00	14.826	14.577	0.249	0.574	4.32	-0.214	2.57
2/9/2013	15:17:00	14.829	14.580	0.249	0.574	4.32	-0.214	2.57
2/9/2013	15:32:00	14.826	14.578	0.248	0.572	4.32	-0.212	2.55
2/9/2013	15:47:00	14.825	14.577	0.248	0.572	4.32	-0.212	2.55
2/9/2013	16:02:00	14.826	14.573	0.253	0.584	4.32	-0.224	2.68
2/9/2013	16:17:00	14.822	14.570	0.252	0.581	4.32	-0.221	2.66
2/9/2013	16:32:00	14.821	14.573	0.248	0.572	4.32	-0.212	2.55
2/9/2013	16:47:00	14.824	14.573	0.251	0.579	4.32	-0.219	2.63
2/9/2013	17:02:00	14.823	14.576	0.247	0.570	4.32	-0.210	2.52
2/9/2013	17:17:00	14.619	14.579	0.040	0.092	4.32	0.268	-3.21
2/9/2013	17:32:00	14.838	14.584	0.254	0.586	4.32	-0.226	2.71
2/9/2013	17:47:00	14.835	14.581	0.254	0.586	4.32	-0.226	2.71
2/9/2013	18:02:00	14.840	14.586	0.254	0.586	4.32	-0.226	2.71
2/9/2013	18:17:00	14.839	14.586	0.253	0.584	4.32	-0.224	2.68
2/9/2013	18:32:00	14.841	14.592	0.249	0.574	4.32	-0.214	2.57
2/9/2013	18:47:00	14.842	14.594	0.248	0.572	4.32	-0.212	2.55
2/9/2013	19:02:00	14.838	14.598	0.240	0.554	4.32	-0.194	2.32
2/9/2013	19:17:00	14.848	14.599	0.249	0.574	4.32	-0.214	2.57
2/9/2013	19:32:00	14.861	14.599	0.262	0.604	4.32	-0.244	2.93
2/9/2013	19:47:00	14.853	14.605	0.248	0.572	4.32	-0.212	2.55
2/9/2013	20:02:00	14.859	14.610	0.249	0.574	4.32	-0.214	2.57
2/9/2013	20:17:00	14.865	14.613	0.252	0.581	4.32	-0.221	2.66
2/9/2013	20:32:00	14.865	14.612	0.253	0.584	4.32	-0.224	2.68
2/9/2013	20:47:00	14.863	14.612	0.251	0.579	4.32	-0.219	2.63
2/9/2013	21:02:00	14.866	14.614	0.252	0.581	4.32	-0.221	2.66
2/9/2013	21:17:00	14.869	14.622	0.247	0.570	4.32	-0.210	2.52
2/9/2013	21:32:00	14.872	14.622	0.250	0.577	4.32	-0.217	2.60
2/9/2013	21:47:00	14.871	14.622	0.249	0.574	4.32	-0.214	2.57
2/9/2013	22:02:00	14.874	14.624	0.250	0.577	4.32	-0.217	2.60
2/9/2013	22:17:00	14.877	14.621	0.256	0.591	4.32	-0.231	2.77
2/9/2013	22:32:00	14.876	14.620	0.256	0.591	4.32	-0.231	2.77
2/9/2013	22:47:00	14.868	14.620	0.248	0.572	4.32	-0.212	2.55
2/9/2013	23:02:00	14.868	14.621	0.247	0.570	4.32	-0.210	2.52
2/9/2013	23:17:00	14.863	14.625	0.238	0.549	4.32	-0.189	2.27
2/9/2013	23:32:00	14.870	14.618	0.252	0.581	4.32	-0.221	2.66
2/9/2013	23:47:00	14.869	14.621	0.248	0.572	4.32	-0.212	2.55
2/10/2013	0:02:00	14.871	14.624	0.247	0.570	4.32	-0.210	2.52
2/10/2013	0:17:00	14.872	14.624	0.248	0.572	4.32	-0.212	2.55
2/10/2013	0:32:00	14.874	14.632	0.242	0.558	4.32	-0.198	2.38
2/10/2013	0:47:00	14.869	14.631	0.238	0.549	4.32	-0.189	2.27
2/10/2013	1:02:00	14.863	14.628	0.235	0.542	4.32	-0.182	2.19
2/10/2013	1:17:00	14.885	14.631	0.254	0.586	4.32	-0.226	2.71
2/10/2013	1:32:00	14.870	14.630	0.240	0.554	4.32	-0.194	2.32
2/10/2013	1:47:00	14.885	14.637	0.248	0.572	4.32	-0.212	2.55
2/10/2013	2:02:00	14.890	14.639	0.251	0.579	4.32	-0.219	2.63
2/10/2013	2:17:00	14.886	14.629	0.257	0.593	4.32	-0.233	2.79
2/10/2013	2:32:00	14.885	14.642	0.243	0.561	4.32	-0.201	2.41
2/10/2013	2:47:00	14.880	14.631	0.249	0.574	4.32	-0.214	2.57
2/10/2013	3:02:00	14.879	14.633	0.246	0.568	4.32	-0.208	2.49
2/10/2013	3:17:00	14.876	14.639	0.237	0.547	4.32	-0.187	2.24
2/10/2013	3:32:00	14.886	14.634	0.252	0.581	4.32	-0.221	2.66
2/10/2013	3:47:00	14.887	14.641	0.246	0.568	4.32	-0.208	2.49
2/10/2013	4:02:00	14.881	14.638	0.243	0.561	4.32	-0.201	2.41
2/10/2013	4:17:00	14.878	14.637	0.241	0.556	4.32	-0.196	2.35
2/10/2013	4:32:00	14.883	14.636	0.247	0.570	4.32	-0.210	2.52
2/10/2013	4:47:00	14.884	14.639	0.245	0.565	4.32	-0.205	2.46
2/10/2013	5:02:00	14.885	14.649	0.236	0.544	4.32	-0.184	2.21
2/10/2013	5:17:00	14.882	14.641	0.241	0.556	4.32	-0.196	2.35
2/10/2013	5:32:00	14.881	14.640	0.241	0.556	4.32	-0.196	2.35
2/10/2013	5:47:00	14.881	14.642	0.239	0.551	4.32	-0.191	2.30
2/10/2013	6:02:00	14.894	14.647	0.247	0.570	4.32	-0.210	2.52
2/10/2013	6:17:00	14.890	14.650	0.240	0.554	4.32	-0.194	2.32
2/10/2013	6:32:00	14.896	14.643	0.253	0.584	4.32	-0.224	2.68
2/10/2013	6:47:00	14.889	14.653	0.236	0.544	4.32	-0.184	2.21
2/10/2013	7:02:00	14.902	14.666	0.236	0.544	4.32	-0.184	2.21
2/10/2013	7:17:00	14.910	14.667	0.243	0.561	4.32	-0.201	2.41
2/10/2013	7:32:00	14.904	14.655	0.249	0.574	4.32	-0.214	2.57
2/10/2013	7:47:00	14.904	14.674	0.230	0.531	4.32	-0.171	2.05
2/10/2013	8:02:00	14.923	14.664	0.259	0.598	4.32	-0.238	2.85
2/10/2013	8:17:00	14.929	14.680	0.249	0.574	4.32	-0.214	2.57
2/10/2013	8:32:00	14.914	14.680	0.234	0.540	4.32	-0.180	2.16
2/10/2013	8:47:00	14.907	14.669	0.238	0.549	4.32	-0.189	2.27
2/10/2013	9:02:00	14.920	14.678	0.242	0.558	4.32	-0.198	2.38
2/10/2013	9:17:00	14.911	14.666	0.245	0.565	4.32	-0.205	2.46
2/10/2013	9:32:00	14.909	14.669	0.240	0.554	4.32	-0.194	2.32
2/10/2013	9:47:00	14.917	14.670	0.247	0.570	4.32	-0.210	2.52
2/10/2013	10:02:00	14.917	14.672	0.245	0.565	4.32	-0.205	2.46
2/10/2013	10:17:00	14.920	14.667	0.253	0.584	4.32	-0.224	2.68
2/10/2013	10:32:00	14.923	14.677	0.246	0.568	4.32	-0.208	2.49
2/10/2013	10:47:00	14.924	14.682	0.242	0.558	4.32	-0.198	2.38
2/10/2013	11:02:00	14.923	14.676	0.247	0.570	4.32	-0.210	2.52
2/10/2013	11:17:00	14.920	14.675	0.245	0.565	4.32	-0.205	2.46
2/10/2013	11:32:00	14.927	14.671	0.256	0.591	4.32	-0.231	2.77
2/10/2013	11:47:00	14.912	14.656	0.256	0.591	4.32	-0.231	2.77
2/10/2013	12:02:00	14.903	14.651	0.252	0.581	4.32	-0.221	2.66
2/10/2013	12:17:00	14.898	14.650	0.248	0.572	4.32	-0.212	2.55
2/10/2013	12:32:00	14.899	14.643	0.256	0.591	4.32	-0.231	2.77
2/10/2013	12:47:00	14.891	14.635	0.256	0.591	4.32	-0.231	2.77
2/10/2013	13:02:00	14.886	14.639	0.247	0.570	4.32	-0.210	2.52
2/10/2013	13:17:00	14.887	14.639	0.248	0.572	4.32	-0.212	2.55
2/10/2013	13:32:00	14.889	14.629	0.260	0.600	4.32	-0.240	2.88
2/10/2013	13:47:00	14.866	14.618	0.248	0.572	4.32	-0.212	2.55
2/10/2013	14:02:00	14.867	14.615	0.252	0.581	4.32	-0.221	2.66
2/10/2013	14:17:00	14.852	14.603	0.249	0.574	4.32	-0.214	2.57
2/10/2013	14:32:00	14.852	14.600	0.252	0.581	4.32	-0.221	2.66
2/10/2013	14:47:00	14.848	14.600	0.248	0.572	4.32	-0.212	2.55
2/10/2013	15:02:00	14.845	14.595	0.250	0.577	4.32	-0.217	2.60
2/10/2013	15:17:00	14.834	14.598	0.236	0.544	4.32	-0.184	2.21
2/10/2013	15:32:00	14.840	14.596	0.244	0.563	4.32	-0.203	2.43
2/10/2013	15:47:00	14.833	14.591	0.242	0.558	4.32	-0.198	2.38
2/10/2013	16:02:00	14.834	14.593	0.241	0.556	4.32	-0.196	2.35
2/10/2013	16:17:00	14.837	14.592	0.245	0.565	4.32	-0.205	2.46
2/10/2013	16:32:00	14.841	14.589	0.252	0.581	4.32	-0.221	2.66
2/10/2013	16:47:00	14.831	14.584	0.247	0.570	4.32	-0.210	2.52
2/10/2013	17:02:00	14.831	14.584	0.247	0.570	4.32	-0.210	2.52
2/10/2013	17:17:00	14.825	14.578	0.247	0.570	4.32	-0.210	2.52
2/10/2013	17:32:00	14.818	14.574	0.244	0.563	4.32	-0.203	2.43
2/10/2013	17:47:00	14.823	14.574	0.249	0.574	4.32	-0.214	2.57
2/10/2013	18:02:00	14.818	14.578	0.240	0.554	4.32	-0.194	2.32
2/10/2013	18:17:00	14.822	14.575	0.247	0.570	4.32	-0.210	2.52
2/10/2013	18:32:00	14.825	14.581	0.244	0.563	4.32	-0.203	2.43
2/10/2013	18:47:00	14.823	14.577	0.246	0.568	4.32	-0.208	2.49
2/10/2013	19:02:00	14.819	14.579	0.240	0.554	4.32	-0.194	2.32
2/10/2013	19:17:00	14.818	14.571	0.247	0.570	4.32	-0.210	2.52
2/10/2013	19:32:00	14.811	14.567	0.244	0.563	4.32	-0.203	2.43
2/10/2013	19:47:00	14.812	14.568	0.244	0.563	4.32	-0.203	2.43
2/10/2013	20:02:00	14.811	14.576	0.235	0.542	4.32	-0.182	2.19
2/10/2013	20:17:00	14.818	14.576	0.242	0.558	4.32	-0.198	2.38
2/10/2013	20:32:00	14.817	14.580	0.237	0.547	4.32	-0.187	2.24
2/10/2013	20:47:00	14.825	14.582	0.243	0.561	4.32	-0.201	2.41
2/10/2013	21:02:00	14.828	14.593	0.235	0.542	4.32	-0.182	2.19
2/10/2013	21:17:00	14.835	14.599	0.236	0.544	4.32	-0.184	2.21
2/10/2013	21:32:00	14.844	14.596	0.248	0.572	4.32	-0.212	2.55
2/10/2013	21:47:00	14.846	14.594	0.252	0.581	4.32	-0.221	2.66

2/10/2013	22:02:00	14.844	14.591	0.253	0.584	4.32	-0.224	2.68	0.01
2/10/2013	22:17:00	14.837	14.574	0.263	0.607	4.32	-0.247	2.96	0.02
2/10/2013	22:32:00	14.823	14.570	0.253	0.584	4.32	-0.224	2.68	0.04
2/10/2013	22:47:00	14.825	14.571	0.254	0.586	4.32	-0.226	2.71	0.05
2/10/2013	23:02:00	14.820	14.562	0.258	0.595	4.32	-0.235	2.82	0.06
2/10/2013	23:17:00	14.810	14.552	0.258	0.595	4.32	-0.235	2.82	0.07
2/10/2013	23:32:00	14.819	14.554	0.265	0.611	4.32	-0.251	3.02	0.08
2/10/2013	23:47:00	14.807	14.548	0.259	0.598	4.32	-0.238	2.85	0.09
2/11/2013	0:02:00	14.823	14.551	0.272	0.628	4.32	-0.268	3.21	0.10
2/11/2013	0:17:00	14.829	14.545	0.284	0.655	4.32	-0.295	3.54	0.11
2/11/2013	0:32:00	14.830	14.545	0.285	0.657	4.32	-0.297	3.57	0.13
2/11/2013	0:47:00	14.821	14.546	0.275	0.634	4.32	-0.274	3.29	0.14
2/11/2013	1:02:00	14.826	14.538	0.288	0.664	4.32	-0.304	3.65	
2/11/2013	1:17:00	14.825	14.530	0.295	0.681	4.32	-0.321	3.85	
2/11/2013	1:32:00	14.813	14.532	0.281	0.648	4.32	-0.288	3.46	0.01
2/11/2013	1:47:00	14.796	14.526	0.270	0.623	4.32	-0.263	3.15	
2/11/2013	2:02:00	14.792	14.523	0.269	0.621	4.32	-0.261	3.13	
2/11/2013	2:17:00	14.800	14.522	0.278	0.641	4.32	-0.281	3.38	
2/11/2013	2:32:00	14.798	14.524	0.274	0.632	4.32	-0.272	3.27	
2/11/2013	2:47:00	14.796	14.525	0.271	0.625	4.32	-0.265	3.18	0.02
2/11/2013	3:02:00	14.792	14.516	0.276	0.637	4.32	-0.277	3.32	
2/11/2013	3:17:00	14.782	14.514	0.268	0.618	4.32	-0.258	3.10	
2/11/2013	3:32:00	14.781	14.507	0.274	0.632	4.32	-0.272	3.27	
2/11/2013	3:47:00	14.777	14.510	0.267	0.616	4.32	-0.256	3.07	
2/11/2013	4:02:00	14.769	14.505	0.264	0.609	4.32	-0.249	2.99	
2/11/2013	4:17:00	14.770	14.496	0.274	0.632	4.32	-0.272	3.27	
2/11/2013	4:32:00	14.759	14.496	0.263	0.607	4.32	-0.247	2.96	
2/11/2013	4:47:00	14.761	14.499	0.262	0.604	4.32	-0.244	2.93	
2/11/2013	5:02:00	14.772	14.496	0.276	0.637	4.32	-0.277	3.32	
2/11/2013	5:17:00	14.780	14.497	0.283	0.653	4.32	-0.293	3.51	0.03
2/11/2013	5:32:00	14.775	14.501	0.274	0.632	4.32	-0.272	3.27	0.04
2/11/2013	5:47:00	14.775	14.502	0.273	0.630	4.32	-0.270	3.24	
2/11/2013	6:02:00	14.780	14.507	0.273	0.630	4.32	-0.270	3.24	
2/11/2013	6:17:00	14.772	14.502	0.270	0.623	4.32	-0.263	3.15	0.05
2/11/2013	6:32:00	14.780	14.499	0.281	0.648	4.32	-0.288	3.46	0.06
2/11/2013	6:47:00	14.785	14.497	0.288	0.664	4.32	-0.304	3.65	0.07
2/11/2013	7:02:00	14.791	14.499	0.292	0.674	4.32	-0.314	3.76	0.08
2/11/2013	7:17:00	14.800	14.499	0.301	0.694	4.32	-0.334	4.01	0.09
2/11/2013	7:32:00	14.820	14.505	0.315	0.727	4.32	-0.367	4.40	0.11
2/11/2013	7:47:00	14.823	14.496	0.327	0.754	4.32	-0.394	4.73	0.12
2/11/2013	8:02:00	14.820	14.497	0.323	0.745	4.32	-0.385	4.62	
2/11/2013	8:17:00	14.832	14.497	0.335	0.773	4.32	-0.413	4.95	
2/11/2013	8:32:00	14.826	14.502	0.324	0.747	4.32	-0.387	4.65	
2/11/2013	8:47:00	14.833	14.503	0.330	0.761	4.32	-0.401	4.82	0.13
2/11/2013	9:02:00	14.834	14.500	0.334	0.771	4.32	-0.411	4.93	
2/11/2013	9:17:00	14.842	14.502	0.340	0.784	4.32	-0.424	5.09	0.14
2/11/2013	9:32:00	14.844	14.502	0.342	0.789	4.32	-0.429	5.15	
2/11/2013	9:47:00	14.846	14.490	0.356	0.821	4.32	-0.461	5.54	
2/11/2013	10:02:00	14.843	14.497	0.346	0.798	4.32	-0.438	5.26	
2/11/2013	10:17:00	14.842	14.489	0.353	0.814	4.32	-0.454	5.45	
2/11/2013	10:32:00	14.833	14.484	0.349	0.805	4.32	-0.445	5.34	
2/11/2013	10:47:00	14.827	14.482	0.345	0.796	4.32	-0.436	5.23	
2/11/2013	11:02:00	14.824	14.480	0.344	0.794	4.32	-0.434	5.20	
2/11/2013	11:17:00	14.819	14.484	0.335	0.773	4.32	-0.413	4.95	
2/11/2013	11:32:00	14.819	14.477	0.342	0.789	4.32	-0.429	5.15	
2/11/2013	11:47:00	14.817	14.484	0.333	0.768	4.32	-0.408	4.90	
2/11/2013	12:02:00	14.811	14.479	0.332	0.766	4.32	-0.406	4.87	
2/11/2013	12:17:00	14.807	14.481	0.326	0.752	4.32	-0.392	4.70	
2/11/2013	12:32:00	14.807	14.480	0.327	0.754	4.32	-0.394	4.73	
2/11/2013	12:47:00	14.808	14.473	0.335	0.773	4.32	-0.413	4.95	
2/11/2013	13:02:00	14.795	14.466	0.329	0.759	4.32	-0.399	4.79	
2/11/2013	13:17:00	14.787	14.460	0.327	0.754	4.32	-0.394	4.73	
2/11/2013	13:32:00	14.779	14.461	0.318	0.734	4.32	-0.374	4.48	
2/11/2013	13:47:00	14.772	14.450	0.322	0.743	4.32	-0.383	4.59	
2/11/2013	14:02:00	14.773	14.461	0.312	0.720	4.32	-0.360	4.32	
2/11/2013	14:17:00	14.772	14.456	0.316	0.729	4.32	-0.369	4.43	
2/11/2013	14:32:00	14.767	14.456	0.311	0.717	4.32	-0.357	4.29	
2/11/2013	14:47:00	14.769	14.467	0.302	0.697	4.32	-0.337	4.04	
2/11/2013	15:02:00	14.777	14.464	0.313	0.722	4.32	-0.362	4.35	
2/11/2013	15:17:00	14.767	14.459	0.308	0.711	4.32	-0.351	4.21	
2/11/2013	15:32:00	14.766	14.454	0.312	0.720	4.32	-0.360	4.32	
2/11/2013	15:47:00	14.763	14.454	0.309	0.713	4.32	-0.353	4.23	
2/11/2013	16:02:00	14.765	14.453	0.312	0.720	4.32	-0.360	4.32	
2/11/2013	16:17:00	14.762	14.451	0.311	0.717	4.32	-0.357	4.29	
2/11/2013	16:32:00	14.761	14.454	0.307	0.708	4.32	-0.348	4.18	0.15
2/11/2013	16:47:00	14.756	14.451	0.305	0.704	4.32	-0.344	4.12	
2/11/2013	17:02:00	14.761	14.450	0.311	0.717	4.32	-0.357	4.29	
2/11/2013	17:17:00	14.765	14.447	0.318	0.734	4.32	-0.374	4.48	
2/11/2013	17:32:00	14.744	14.434	0.310	0.715	4.32	-0.355	4.26	
2/11/2013	17:47:00	14.741	14.435	0.306	0.706	4.32	-0.346	4.15	
2/11/2013	18:02:00	14.740	14.454	0.286	0.660	4.32	-0.300	3.60	
2/11/2013	18:17:00	14.771	14.458	0.313	0.722	4.32	-0.362	4.35	0.16
2/11/2013	18:32:00	14.774	14.462	0.312	0.720	4.32	-0.360	4.32	
2/11/2013	18:47:00	14.776	14.460	0.316	0.729	4.32	-0.369	4.43	
2/11/2013	19:02:00	14.764	14.453	0.311	0.717	4.32	-0.357	4.29	
2/11/2013	19:17:00	14.773	14.453	0.320	0.738	4.32	-0.378	4.54	
2/11/2013	19:32:00	14.769	14.457	0.312	0.720	4.32	-0.360	4.32	
2/11/2013	19:47:00	14.771	14.458	0.313	0.722	4.32	-0.362	4.35	
2/11/2013	20:02:00	14.771	14.460	0.311	0.717	4.32	-0.357	4.29	
2/11/2013	20:17:00	14.769	14.460	0.309	0.713	4.32	-0.353	4.23	
2/11/2013	20:32:00	14.769	14.459	0.310	0.715	4.32	-0.355	4.26	
2/11/2013	20:47:00	14.768	14.459	0.309	0.713	4.32	-0.353	4.23	
2/11/2013	21:02:00	14.762	14.462	0.300	0.692	4.32	-0.332	3.99	
2/11/2013	21:17:00	14.769	14.458	0.311	0.717	4.32	-0.357	4.29	
2/11/2013	21:32:00	14.767	14.463	0.304	0.701	4.32	-0.341	4.10	
2/11/2013	21:47:00	14.769	14.453	0.316	0.729	4.32	-0.369	4.43	
2/11/2013	22:02:00	14.757	14.460	0.297	0.685	4.32	-0.325	3.90	
2/11/2013	22:17:00	14.761	14.457	0.304	0.701	4.32	-0.341	4.10	
2/11/2013	22:32:00	14.765	14.460	0.305	0.704	4.32	-0.344	4.12	
2/11/2013	22:47:00	14.760	14.455	0.305	0.704	4.32	-0.344	4.12	
2/11/2013	23:02:00	14.756	14.454	0.302	0.697	4.32	-0.337	4.04	
2/11/2013	23:17:00	14.754	14.448	0.306	0.706	4.32	-0.346	4.15	
2/11/2013	23:32:00	14.754	14.460	0.294	0.678	4.32	-0.318	3.82	
2/11/2013	23:47:00	14.756	14.458	0.298	0.687	4.32	-0.327	3.93	
2/12/2013	0:02:00	14.757	14.454	0.303	0.699	4.32	-0.339	4.07	
2/12/2013	0:17:00	14.754	14.454	0.300	0.692	4.32	-0.332	3.99	
2/12/2013	0:32:00	14.752	14.458	0.294	0.678	4.32	-0.318	3.82	
2/12/2013	0:47:00	14.758	14.461	0.297	0.685	4.32	-0.325	3.90	
2/12/2013	1:02:00	14.762	14.461	0.301	0.694	4.32	-0.334	4.01	
2/12/2013	1:17:00	14.763	14.457	0.306	0.706	4.32	-0.346	4.15	
2/12/2013	1:32:00	14.759	14.464	0.295	0.681	4.32	-0.321	3.85	
2/12/2013	1:47:00	14.763	14.462	0.301	0.694	4.32	-0.334	4.01	
2/12/2013	2:02:00	14.753	14.456	0.297	0.685	4.32	-0.325	3.90	
2/12/2013	2:17:00	14.754	14.462	0.292	0.674	4.32	-0.314	3.76	
2/12/2013	2:32:00	14.750	14.461	0.289	0.667	4.32	-0.307	3.68	
2/12/2013	2:47:00	14.750	14.449	0.301	0.694	4.32	-0.334	4.01	
2/12/2013	3:02:00	14.746	14.453	0.293	0.676	4.32	-0.316	3.79	
2/12/2013	3:17:00	14.752	14.457	0.295	0.681	4.32	-0.321	3.85	
2/12/2013	3:32:00	14.749	14.464	0.285	0.657	4.32	-0.297	3.57	
2/12/2013	3:47:00	14.756	14.457	0.299	0.690	4.32	-0.330	3.96	
2/12/2013	4:02:00	14.736	14.455	0.281	0.648	4.32	-0.288	3.46	
2/12/2013	4:17:00	14.741	14.453	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	4:32:00	14.748	14.460	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	4:47:00	14.744	14.455	0.289	0.667	4.32	-0.307	3.68	
2/12/2013	5:02:00	14.754	14.461	0.293	0.676	4.32	-0.316	3.79	
2/12/2013	5:17:00	14.757	14.459	0.298	0.687	4.32	-0.327	3.93	
2/12/2013	5:32:00	14.756	14.472	0.284	0.655	4.32	-0.295	3.54	
2/12/2013	5:47:00	14.760	14.474	0.286	0.660	4.32	-0.300	3.60	
2/12/2013	6:02:00	14.766	14.471	0.295	0.681	4.32	-0.321	3.85	
2/12/2013	6:17:00	14.765	14.473	0.292	0.674	4.32	-0.314	3.76	
2/12/2013	6:32:00	14.760	14.472	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	6:47:00	14.766	14.478	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	7:02:00	14.767	14.478	0.289	0.667	4.32	-0.307	3.68	

2/12/2013	7:17:00	14.768	14.474	0.294	0.678	4.32	-0.318	3.82	
2/12/2013	7:32:00	14.761	14.470	0.291	0.671	4.32	-0.311	3.74	
2/12/2013	7:47:00	14.770	14.479	0.291	0.671	4.32	-0.311	3.74	
2/12/2013	8:02:00	14.771	14.486	0.285	0.657	4.32	-0.297	3.57	
2/12/2013	8:17:00	14.769	14.487	0.282	0.651	4.32	-0.291	3.49	
2/12/2013	8:32:00	14.781	14.490	0.291	0.671	4.32	-0.311	3.74	
2/12/2013	8:47:00	14.787	14.496	0.291	0.671	4.32	-0.311	3.74	
2/12/2013	9:02:00	14.793	14.497	0.296	0.683	4.32	-0.323	3.87	
2/12/2013	9:17:00	14.790	14.502	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	9:32:00	14.795	14.495	0.300	0.692	4.32	-0.332	3.99	
2/12/2013	9:47:00	14.792	14.506	0.286	0.660	4.32	-0.300	3.60	
2/12/2013	10:02:00	14.795	14.506	0.289	0.667	4.32	-0.307	3.68	
2/12/2013	10:17:00	14.801	14.509	0.292	0.674	4.32	-0.314	3.76	
2/12/2013	10:32:00	14.789	14.503	0.286	0.660	4.32	-0.300	3.60	
2/12/2013	10:47:00	14.789	14.494	0.295	0.681	4.32	-0.321	3.85	
2/12/2013	11:02:00	14.779	14.501	0.278	0.641	4.32	-0.281	3.38	
2/12/2013	11:17:00	14.774	14.496	0.278	0.641	4.32	-0.281	3.38	
2/12/2013	11:32:00	14.776	14.489	0.287	0.662	4.32	-0.302	3.63	
2/12/2013	11:47:00	14.783	14.487	0.296	0.683	4.32	-0.323	3.87	
2/12/2013	12:02:00	14.769	14.492	0.277	0.639	4.32	-0.279	3.35	
2/12/2013	12:17:00	14.777	14.489	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	12:32:00	14.770	14.481	0.289	0.667	4.32	-0.307	3.68	
2/12/2013	12:47:00	14.770	14.478	0.292	0.674	4.32	-0.314	3.76	
2/12/2013	13:02:00	14.750	14.466	0.284	0.655	4.32	-0.295	3.54	
2/12/2013	13:17:00	14.746	14.462	0.284	0.655	4.32	-0.295	3.54	
2/12/2013	13:32:00	14.742	14.465	0.277	0.639	4.32	-0.279	3.35	
2/12/2013	13:47:00	14.748	14.463	0.285	0.657	4.32	-0.297	3.57	
2/12/2013	14:02:00	14.744	14.459	0.285	0.657	4.32	-0.297	3.57	
2/12/2013	14:17:00	14.743	14.463	0.280	0.646	4.32	-0.286	3.43	
2/12/2013	14:32:00	14.744	14.465	0.279	0.644	4.32	-0.284	3.40	
2/12/2013	14:47:00	14.742	14.460	0.282	0.651	4.32	-0.291	3.49	
2/12/2013	15:02:00	14.742	14.461	0.281	0.648	4.32	-0.288	3.46	
2/12/2013	15:17:00	14.742	14.458	0.284	0.655	4.32	-0.295	3.54	
2/12/2013	15:32:00	14.733	14.453	0.280	0.646	4.32	-0.286	3.43	
2/12/2013	15:47:00	14.727	14.448	0.279	0.644	4.32	-0.284	3.40	
2/12/2013	16:02:00	14.733	14.458	0.275	0.634	4.32	-0.274	3.29	
2/12/2013	16:17:00	14.735	14.450	0.285	0.657	4.32	-0.297	3.57	
2/12/2013	16:32:00	14.730	14.444	0.286	0.660	4.32	-0.300	3.60	
2/12/2013	16:47:00	14.731	14.447	0.284	0.655	4.32	-0.295	3.54	
2/12/2013	17:02:00	14.725	14.442	0.283	0.653	4.32	-0.293	3.51	
2/12/2013	17:17:00	14.730	14.448	0.282	0.651	4.32	-0.291	3.49	
2/12/2013	17:32:00	14.734	14.451	0.283	0.653	4.32	-0.293	3.51	
2/12/2013	17:47:00	14.730	14.442	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	18:02:00	14.718	14.443	0.275	0.634	4.32	-0.274	3.29	
2/12/2013	18:17:00	14.724	14.442	0.282	0.651	4.32	-0.291	3.49	
2/12/2013	18:32:00	14.719	14.433	0.286	0.660	4.32	-0.300	3.60	
2/12/2013	18:47:00	14.712	14.436	0.276	0.637	4.32	-0.277	3.32	
2/12/2013	19:02:00	14.706	14.421	0.285	0.657	4.32	-0.297	3.57	
2/12/2013	19:17:00	14.709	14.422	0.287	0.662	4.32	-0.302	3.63	
2/12/2013	19:32:00	14.701	14.423	0.278	0.641	4.32	-0.281	3.38	
2/12/2013	19:47:00	14.706	14.433	0.273	0.630	4.32	-0.270	3.24	
2/12/2013	20:02:00	14.712	14.443	0.269	0.621	4.32	-0.261	3.13	
2/12/2013	20:17:00	14.725	14.446	0.279	0.644	4.32	-0.284	3.40	
2/12/2013	20:32:00	14.728	14.447	0.281	0.648	4.32	-0.288	3.46	
2/12/2013	20:47:00	14.723	14.437	0.286	0.660	4.32	-0.300	3.60	
2/12/2013	21:02:00	14.719	14.448	0.271	0.625	4.32	-0.265	3.18	
2/12/2013	21:17:00	14.728	14.453	0.275	0.634	4.32	-0.274	3.29	
2/12/2013	21:32:00	14.726	14.451	0.275	0.634	4.32	-0.274	3.29	
2/12/2013	21:47:00	14.731	14.452	0.279	0.644	4.32	-0.284	3.40	
2/12/2013	22:02:00	14.728	14.443	0.285	0.657	4.32	-0.297	3.57	0.01
2/12/2013	22:17:00	14.719	14.449	0.270	0.623	4.32	-0.263	3.15	
2/12/2013	22:32:00	14.731	14.446	0.285	0.657	4.32	-0.297	3.57	0.03
2/12/2013	22:47:00	14.732	14.441	0.291	0.671	4.32	-0.311	3.74	
2/12/2013	23:02:00	14.725	14.433	0.292	0.674	4.32	-0.314	3.76	0.04
2/12/2013	23:17:00	14.716	14.422	0.294	0.678	4.32	-0.318	3.82	
2/12/2013	23:32:00	14.705	14.417	0.288	0.664	4.32	-0.304	3.65	
2/12/2013	23:47:00	14.708	14.435	0.273	0.630	4.32	-0.270	3.24	0.05
2/13/2013	0:02:00	14.730	14.428	0.302	0.697	4.32	-0.337	4.04	0.06
2/13/2013	0:17:00	14.719	14.415	0.304	0.701	4.32	-0.341	4.10	0.07
2/13/2013	0:32:00	14.723	14.426	0.297	0.685	4.32	-0.325	3.90	0.08
2/13/2013	0:47:00	14.726	14.400	0.326	0.752	4.32	-0.392	4.70	0.09
2/13/2013	1:02:00	14.710	14.397	0.313	0.722	4.32	-0.362	4.35	0.01
2/13/2013	1:17:00	14.723	14.388	0.335	0.773	4.32	-0.413	4.95	0.02
2/13/2013	1:32:00	14.718	14.400	0.318	0.734	4.32	-0.374	4.48	
2/13/2013	1:47:00	14.729	14.386	0.343	0.791	4.32	-0.431	5.18	0.03
2/13/2013	2:02:00	14.727	14.381	0.346	0.798	4.32	-0.438	5.26	
2/13/2013	2:17:00	14.726	14.386	0.340	0.784	4.32	-0.424	5.09	
2/13/2013	2:32:00	14.723	14.384	0.339	0.782	4.32	-0.422	5.06	
2/13/2013	2:47:00	14.724	14.385	0.339	0.782	4.32	-0.422	5.06	
2/13/2013	3:02:00	14.720	14.379	0.341	0.787	4.32	-0.427	5.12	
2/13/2013	3:17:00	14.714	14.382	0.332	0.766	4.32	-0.406	4.87	
2/13/2013	3:32:00	14.712	14.374	0.338	0.780	4.32	-0.420	5.04	
2/13/2013	3:47:00	14.717	14.371	0.346	0.798	4.32	-0.438	5.26	
2/13/2013	4:02:00	14.719	14.378	0.341	0.787	4.32	-0.427	5.12	0.04
2/13/2013	4:17:00	14.716	14.373	0.343	0.791	4.32	-0.431	5.18	
2/13/2013	4:32:00	14.721	14.374	0.347	0.801	4.32	-0.441	5.29	
2/13/2013	4:47:00	14.717	14.366	0.351	0.810	4.32	-0.450	5.40	0.05
2/13/2013	5:02:00	14.717	14.361	0.356	0.821	4.32	-0.461	5.54	
2/13/2013	5:17:00	14.711	14.362	0.349	0.805	4.32	-0.445	5.34	
2/13/2013	5:32:00	14.711	14.356	0.355	0.819	4.32	-0.459	5.51	0.06
2/13/2013	5:47:00	14.710	14.361	0.349	0.805	4.32	-0.445	5.34	0.07
2/13/2013	6:02:00	14.714	14.366	0.348	0.803	4.32	-0.443	5.31	
2/13/2013	6:17:00	14.713	14.362	0.351	0.810	4.32	-0.450	5.40	
2/13/2013	6:32:00	14.716	14.360	0.356	0.821	4.32	-0.461	5.54	
2/13/2013	6:47:00	14.716	14.359	0.357	0.824	4.32	-0.464	5.56	
2/13/2013	7:02:00	14.715	14.353	0.362	0.835	4.32	-0.475	5.70	
2/13/2013	7:17:00	14.704	14.358	0.346	0.798	4.32	-0.438	5.26	
2/13/2013	7:32:00	14.704	14.360	0.344	0.794	4.32	-0.434	5.20	
2/13/2013	7:47:00	14.705	14.358	0.347	0.801	4.32	-0.441	5.29	
2/13/2013	8:02:00	14.701	14.359	0.342	0.789	4.32	-0.429	5.15	
2/13/2013	8:17:00	14.708	14.347	0.361	0.833	4.32	-0.473	5.67	
2/13/2013	8:32:00	14.696	14.340	0.356	0.821	4.32	-0.461	5.54	
2/13/2013	8:47:00	14.689	14.351	0.338	0.780	4.32	-0.420	5.04	
2/13/2013	9:02:00	14.688	14.357	0.331	0.764	4.32	-0.404	4.84	
2/13/2013	9:17:00	14.685	14.342	0.343	0.791	4.32	-0.431	5.18	
2/13/2013	9:32:00	14.692	14.354	0.338	0.780	4.32	-0.420	5.04	
2/13/2013	9:47:00	14.679	14.337	0.342	0.789	4.32	-0.429	5.15	
2/13/2013	10:02:00	14.684	14.357	0.327	0.754	4.32	-0.394	4.73	
2/13/2013	10:17:00	14.676	14.338	0.338	0.780	4.32	-0.420	5.04	
2/13/2013	10:32:00	14.669	14.353	0.316	0.729	4.32	-0.369	4.43	
2/13/2013	10:47:00	14.666	14.344	0.322	0.743	4.32	-0.383	4.59	
2/13/2013	11:02:00	14.664	14.335	0.329	0.759	4.32	-0.399	4.79	0.09
2/13/2013	11:17:00	14.655	14.336	0.319	0.736	4.32	-0.376	4.51	
2/13/2013	11:32:00	14.665	14.324	0.341	0.787	4.32	-0.427	5.12	
2/13/2013	11:47:00	14.656	14.322	0.334	0.771	4.32	-0.411	4.93	
2/13/2013	12:02:00	14.663	14.332	0.331	0.764	4.32	-0.404	4.84	
2/13/2013	12:17:00	14.646	14.304	0.342	0.789	4.32	-0.429	5.15	
2/13/2013	12:32:00	14.638	14.299	0.339	0.782	4.32	-0.422	5.06	
2/13/2013	12:47:00	14.643	14.302	0.341	0.787	4.32	-0.427	5.12	
2/13/2013	13:02:00	14.636	14.287	0.349	0.805	4.32	-0.445	5.34	
2/13/2013	13:17:00	14.646	14.301	0.345	0.796	4.32	-0.436	5.23	
2/13/2013	13:32:00	14.638	14.290	0.348	0.803	4.32	-0.443	5.31	
2/13/2013	13:47:00	14.632	14.292	0.340	0.784	4.32	-0.424	5.09	
2/13/2013	14:02:00	14.628	14.281	0.347	0.801	4.32	-0.441	5.29	
2/13/2013	14:17:00	14.626	14.294	0.332	0.766	4.32	-0.406	4.87	
2/13/2013	14:32:00	14.625	14.294	0.331	0.764	4.32	-0.404	4.84	
2/13/2013	14:47:00	14.627	14.294	0.333	0.768	4.32	-0.408	4.90	
2/13/2013	15:02:00	14.628	14.295	0.333	0.768	4.32	-0.408	4.90	
2/13/2013	15:17:00	14.637	14.299	0.338	0.780	4.32	-0.420	5.04	
2/13/2013	15:32:00	14.632	14.303	0.329	0.759	4.32	-0.399	4.79	
2/13/2013	15:47:00	14.631	14.300	0.331	0.764	4.32	-0.404	4.84	
2/13/2013	16:02:00	14.628	14.304	0.324	0.747	4.32	-0.387	4.65	
2/13/2013	16:17:00	14.630	14.302	0.328	0.757	4.32	-0.397	4.76	

2/13/2013	16:32:00	14.631	14.302	0.329	0.759	4.32	-0.399	4.79
2/13/2013	16:47:00	14.622	14.293	0.329	0.759	4.32	-0.399	4.79
2/13/2013	17:02:00	14.628	14.308	0.320	0.738	4.32	-0.378	4.54
2/13/2013	17:17:00	14.627	14.313	0.314	0.724	4.32	-0.364	4.37
2/13/2013	17:32:00	14.629	14.308	0.321	0.741	4.32	-0.381	4.57
2/13/2013	17:47:00	14.637	14.318	0.319	0.736	4.32	-0.376	4.51
2/13/2013	18:02:00	14.638	14.313	0.325	0.750	4.32	-0.390	4.68
2/13/2013	18:17:00	14.644	14.322	0.322	0.743	4.32	-0.383	4.59
2/13/2013	18:32:00	14.652	14.323	0.329	0.759	4.32	-0.399	4.79
2/13/2013	18:47:00	14.639	14.317	0.322	0.743	4.32	-0.383	4.59
2/13/2013	19:02:00	14.643	14.328	0.315	0.727	4.32	-0.367	4.40
2/13/2013	19:17:00	14.644	14.331	0.313	0.722	4.32	-0.362	4.35
2/13/2013	19:32:00	14.655	14.331	0.324	0.747	4.32	-0.387	4.65
2/13/2013	19:47:00	14.659	14.338	0.321	0.741	4.32	-0.381	4.57
2/13/2013	20:02:00	14.655	14.338	0.317	0.731	4.32	-0.371	4.46
2/13/2013	20:17:00	14.653	14.338	0.315	0.727	4.32	-0.367	4.40
2/13/2013	20:32:00	14.658	14.345	0.313	0.722	4.32	-0.362	4.35
2/13/2013	20:47:00	14.659	14.347	0.312	0.720	4.32	-0.360	4.32
2/13/2013	21:02:00	14.659	14.347	0.312	0.720	4.32	-0.360	4.32
2/13/2013	21:17:00	14.664	14.356	0.308	0.711	4.32	-0.351	4.21
2/13/2013	21:32:00	14.671	14.356	0.315	0.727	4.32	-0.367	4.40
2/13/2013	21:47:00	14.674	14.361	0.313	0.722	4.32	-0.362	4.35
2/13/2013	22:02:00	14.678	14.369	0.309	0.713	4.32	-0.353	4.23
2/13/2013	22:17:00	14.683	14.372	0.311	0.717	4.32	-0.357	4.29
2/13/2013	22:32:00	14.680	14.375	0.305	0.704	4.32	-0.344	4.12
2/13/2013	22:47:00	14.686	14.377	0.309	0.713	4.32	-0.353	4.23
2/13/2013	23:02:00	14.690	14.378	0.312	0.720	4.32	-0.360	4.32
2/13/2013	23:17:00	14.691	14.376	0.315	0.727	4.32	-0.367	4.40
2/13/2013	23:32:00	14.692	14.381	0.311	0.717	4.32	-0.357	4.29
2/13/2013	23:47:00	14.697	14.389	0.308	0.711	4.32	-0.351	4.21
2/14/2013	0:02:00	14.696	14.376	0.320	0.738	4.32	-0.378	4.54
2/14/2013	0:17:00	14.701	14.395	0.306	0.706	4.32	-0.346	4.15
2/14/2013	0:32:00	14.698	14.393	0.305	0.704	4.32	-0.344	4.12
2/14/2013	0:47:00	14.701	14.395	0.306	0.706	4.32	-0.346	4.15
2/14/2013	1:02:00	14.704	14.397	0.307	0.708	4.32	-0.348	4.18
2/14/2013	1:17:00	14.705	14.403	0.302	0.697	4.32	-0.337	4.04
2/14/2013	1:32:00	14.708	14.407	0.301	0.694	4.32	-0.334	4.01
2/14/2013	1:47:00	14.713	14.405	0.308	0.711	4.32	-0.351	4.21
2/14/2013	2:02:00	14.707	14.404	0.303	0.699	4.32	-0.339	4.07
2/14/2013	2:17:00	14.712	14.408	0.304	0.701	4.32	-0.341	4.10
2/14/2013	2:32:00	14.710	14.410	0.300	0.692	4.32	-0.332	3.99
2/14/2013	2:47:00	14.715	14.416	0.299	0.690	4.32	-0.330	3.96
2/14/2013	3:02:00	14.714	14.415	0.299	0.690	4.32	-0.330	3.96
2/14/2013	3:17:00	14.722	14.417	0.305	0.704	4.32	-0.344	4.12
2/14/2013	3:32:00	14.721	14.422	0.299	0.690	4.32	-0.330	3.96
2/14/2013	3:47:00	14.703	14.423	0.280	0.646	4.32	-0.286	3.43
2/14/2013	4:02:00	14.713	14.426	0.287	0.662	4.32	-0.302	3.63
2/14/2013	4:17:00	14.725	14.428	0.297	0.685	4.32	-0.325	3.90
2/14/2013	4:32:00	14.743	14.435	0.308	0.711	4.32	-0.351	4.21
2/14/2013	4:47:00	14.725	14.435	0.290	0.669	4.32	-0.309	3.71
2/14/2013	5:02:00	14.733	14.435	0.298	0.687	4.32	-0.327	3.93
2/14/2013	5:17:00	14.739	14.441	0.298	0.687	4.32	-0.327	3.93
2/14/2013	5:32:00	14.742	14.442	0.300	0.692	4.32	-0.332	3.99
2/14/2013	5:47:00	14.743	14.449	0.294	0.678	4.32	-0.318	3.82
2/14/2013	6:02:00	14.742	14.446	0.296	0.683	4.32	-0.323	3.87
2/14/2013	6:17:00	14.743	14.453	0.290	0.669	4.32	-0.309	3.71
2/14/2013	6:32:00	14.741	14.453	0.288	0.664	4.32	-0.304	3.65
2/14/2013	6:47:00	14.740	14.453	0.287	0.662	4.32	-0.302	3.63
2/14/2013	7:02:00	14.747	14.463	0.284	0.655	4.32	-0.295	3.54
2/14/2013	7:17:00	14.747	14.467	0.280	0.646	4.32	-0.286	3.43
2/14/2013	7:32:00	14.762	14.468	0.294	0.678	4.32	-0.318	3.82
2/14/2013	7:47:00	14.765	14.490	0.275	0.634	4.32	-0.274	3.29
2/14/2013	8:02:00	14.772	14.471	0.301	0.694	4.32	-0.334	4.01
2/14/2013	8:17:00	14.771	14.478	0.293	0.676	4.32	-0.316	3.79
2/14/2013	8:32:00	14.775	14.483	0.292	0.674	4.32	-0.314	3.76
2/14/2013	8:47:00	14.769	14.475	0.294	0.678	4.32	-0.318	3.82
2/14/2013	9:02:00	14.774	14.476	0.298	0.687	4.32	-0.327	3.93
2/14/2013	9:17:00	14.763	14.475	0.288	0.664	4.32	-0.304	3.65
2/14/2013	9:32:00	14.782	14.484	0.298	0.687	4.32	-0.327	3.93
2/14/2013	9:47:00	14.776	14.477	0.299	0.690	4.32	-0.330	3.96
2/14/2013	10:02:00	14.788	14.485	0.303	0.699	4.32	-0.339	4.07
2/14/2013	10:17:00	14.783	14.484	0.299	0.690	4.32	-0.330	3.96
2/14/2013	10:32:00	14.779	14.489	0.290	0.669	4.32	-0.309	3.71
2/14/2013	10:47:00	14.779	14.487	0.292	0.674	4.32	-0.314	3.76
2/14/2013	11:02:00	14.784	14.485	0.299	0.690	4.32	-0.330	3.96
2/14/2013	11:17:00	14.784	14.498	0.286	0.660	4.32	-0.300	3.60
2/14/2013	11:32:00	14.786	14.495	0.291	0.671	4.32	-0.311	3.74
2/14/2013	11:47:00	14.787	14.490	0.297	0.685	4.32	-0.325	3.90
2/14/2013	12:02:00	14.785	14.489	0.296	0.683	4.32	-0.323	3.87
2/14/2013	12:17:00	14.785	14.489	0.296	0.683	4.32	-0.323	3.87
2/14/2013	12:32:00	14.777	14.480	0.297	0.685	4.32	-0.325	3.90
2/14/2013	12:47:00	14.778	14.478	0.300	0.692	4.32	-0.332	3.99
2/14/2013	13:02:00	14.769	14.472	0.297	0.685	4.32	-0.325	3.90
2/14/2013	13:17:00	14.760	14.468	0.292	0.674	4.32	-0.314	3.76
2/14/2013	13:32:00	14.754	14.461	0.293	0.676	4.32	-0.316	3.79
2/14/2013	13:47:00	14.754	14.460	0.294	0.678	4.32	-0.318	3.82
2/14/2013	14:02:00	14.745	14.459	0.286	0.660	4.32	-0.300	3.60
2/14/2013	14:17:00	14.757	14.462	0.295	0.681	4.32	-0.321	3.85
2/14/2013	14:32:00	14.755	14.461	0.294	0.678	4.32	-0.318	3.82
2/14/2013	14:47:00	14.751	14.460	0.291	0.671	4.32	-0.311	3.74
2/14/2013	15:02:00	14.744	14.454	0.290	0.669	4.32	-0.309	3.71
2/14/2013	15:17:00	14.745	14.461	0.284	0.655	4.32	-0.295	3.54
2/14/2013	15:32:00	14.753	14.459	0.294	0.678	4.32	-0.318	3.82
2/14/2013	15:47:00	14.752	14.464	0.288	0.664	4.32	-0.304	3.65
2/14/2013	16:02:00	14.746	14.461	0.285	0.657	4.32	-0.297	3.57
2/14/2013	16:17:00	14.744	14.453	0.291	0.671	4.32	-0.311	3.74
2/14/2013	16:32:00	14.741	14.457	0.284	0.655	4.32	-0.295	3.54
2/14/2013	16:47:00	14.747	14.454	0.293	0.676	4.32	-0.316	3.79
2/14/2013	17:02:00	14.750	14.460	0.290	0.669	4.32	-0.309	3.71
2/14/2013	17:17:00	14.744	14.455	0.289	0.667	4.32	-0.307	3.68
2/14/2013	17:32:00	14.747	14.458	0.289	0.667	4.32	-0.307	3.68
2/14/2013	17:47:00	14.747	14.457	0.290	0.669	4.32	-0.309	3.71
2/14/2013	18:02:00	14.747	14.460	0.287	0.662	4.32	-0.302	3.63
2/14/2013	18:17:00	14.748	14.461	0.287	0.662	4.32	-0.302	3.63
2/14/2013	18:32:00	14.748	14.448	0.300	0.692	4.32	-0.332	3.99
2/14/2013	18:47:00	14.749	14.463	0.286	0.660	4.32	-0.300	3.60
2/14/2013	19:02:00	14.752	14.465	0.287	0.662	4.32	-0.302	3.63
2/14/2013	19:17:00	14.755	14.468	0.287	0.662	4.32	-0.302	3.63
2/14/2013	19:32:00	14.750	14.477	0.273	0.630	4.32	-0.270	3.24
2/14/2013	19:47:00	14.759	14.474	0.285	0.657	4.32	-0.297	3.57
2/14/2013	20:02:00	14.761	14.475	0.286	0.660	4.32	-0.300	3.60
2/14/2013	20:17:00	14.761	14.474	0.287	0.662	4.32	-0.302	3.63
2/14/2013	20:32:00	14.763	14.475	0.288	0.664	4.32	-0.304	3.65
2/14/2013	20:47:00	14.764	14.485	0.279	0.644	4.32	-0.284	3.40
2/14/2013	21:02:00	14.772	14.484	0.288	0.664	4.32	-0.304	3.65
2/14/2013	21:17:00	14.770	14.484	0.286	0.660	4.32	-0.300	3.60
2/14/2013	21:32:00	14.763	14.483	0.280	0.646	4.32	-0.286	3.43
2/14/2013	21:47:00	14.767	14.485	0.282	0.651	4.32	-0.291	3.49
2/14/2013	22:02:00	14.766	14.484	0.282	0.651	4.32	-0.291	3.49
2/14/2013	22:17:00	14.769	14.481	0.288	0.664	4.32	-0.304	3.65
2/14/2013	22:32:00	14.765	14.486	0.279	0.644	4.32	-0.284	3.40
2/14/2013	22:47:00	14.769	14.485	0.284	0.655	4.32	-0.295	3.54
2/14/2013	23:02:00	14.767	14.488	0.279	0.644	4.32	-0.284	3.40
2/14/2013	23:17:00	14.768	14.486	0.282	0.651	4.32	-0.291	3.49
2/14/2013	23:32:00	14.766	14.493	0.273	0.630	4.32	-0.270	3.24
2/14/2013	23:47:00	14.772	14.496	0.276	0.637	4.32	-0.277	3.32
2/15/2013	0:02:00	14.767	14.494	0.273	0.630	4.32	-0.270	3.24
2/15/2013	0:17:00	14.766	14.494	0.272	0.628	4.32	-0.268	3.21
2/15/2013	0:32:00	14.781	14.497	0.284	0.655	4.32	-0.295	3.54
2/15/2013	0:47:00	14.788	14.496	0.292	0.674	4.32	-0.314	3.76
2/15/2013	1:02:00	14.781	14.491	0.290	0.669	4.32	-0.309	3.71
2/15/2013	1:17:00	14.778	14.491	0.287	0.662	4.32	-0.302	3.63
2/15/2013	1:32:00	14.774	14.488	0.286	0.660	4.32	-0.300	3.60

2/15/2013	1:47:00	14.768	14.491	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	2:02:00	14.768	14.493	0.275	0.634	4.32	-0.274	3.29	
2/15/2013	2:17:00	14.762	14.485	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	2:32:00	14.761	14.488	0.273	0.630	4.32	-0.270	3.24	
2/15/2013	2:47:00	14.762	14.477	0.285	0.657	4.32	-0.297	3.57	
2/15/2013	3:02:00	14.759	14.485	0.274	0.632	4.32	-0.272	3.27	
2/15/2013	3:17:00	14.761	14.479	0.282	0.651	4.32	-0.291	3.49	
2/15/2013	3:32:00	14.758	14.483	0.275	0.634	4.32	-0.274	3.29	
2/15/2013	3:47:00	14.763	14.482	0.281	0.648	4.32	-0.288	3.46	
2/15/2013	4:02:00	14.759	14.486	0.273	0.630	4.32	-0.270	3.24	
2/15/2013	4:17:00	14.762	14.491	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	4:32:00	14.760	14.484	0.276	0.637	4.32	-0.277	3.32	
2/15/2013	4:47:00	14.760	14.485	0.275	0.634	4.32	-0.274	3.29	
2/15/2013	5:02:00	14.757	14.486	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	5:17:00	14.758	14.486	0.272	0.628	4.32	-0.268	3.21	
2/15/2013	5:32:00	14.761	14.487	0.274	0.632	4.32	-0.272	3.27	
2/15/2013	5:47:00	14.764	14.488	0.276	0.637	4.32	-0.277	3.32	
2/15/2013	6:02:00	14.765	14.492	0.273	0.630	4.32	-0.270	3.24	
2/15/2013	6:17:00	14.769	14.493	0.276	0.637	4.32	-0.277	3.32	
2/15/2013	6:32:00	14.772	14.498	0.274	0.632	4.32	-0.272	3.27	
2/15/2013	6:47:00	14.773	14.496	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	7:02:00	14.771	14.493	0.278	0.641	4.32	-0.281	3.38	
2/15/2013	7:17:00	14.769	14.500	0.269	0.621	4.32	-0.261	3.13	
2/15/2013	7:32:00	14.773	14.502	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	7:47:00	14.782	14.498	0.284	0.655	4.32	-0.295	3.54	
2/15/2013	8:02:00	14.778	14.498	0.280	0.646	4.32	-0.286	3.43	
2/15/2013	8:17:00	14.781	14.516	0.265	0.611	4.32	-0.251	3.02	
2/15/2013	8:32:00	14.778	14.500	0.278	0.641	4.32	-0.281	3.38	
2/15/2013	8:47:00	14.770	14.500	0.270	0.623	4.32	-0.263	3.15	
2/15/2013	9:02:00	14.787	14.499	0.288	0.664	4.32	-0.304	3.65	
2/15/2013	9:17:00	14.786	14.495	0.291	0.671	4.32	-0.311	3.74	
2/15/2013	9:32:00	14.787	14.497	0.290	0.669	4.32	-0.309	3.71	
2/15/2013	9:47:00	14.778	14.501	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	10:02:00	14.770	14.500	0.270	0.623	4.32	-0.263	3.15	
2/15/2013	10:17:00	14.776	14.500	0.276	0.637	4.32	-0.277	3.32	
2/15/2013	10:32:00	14.771	14.499	0.272	0.628	4.32	-0.268	3.21	
2/15/2013	10:47:00	14.770	14.495	0.275	0.634	4.32	-0.274	3.29	
2/15/2013	11:02:00	14.776	14.490	0.286	0.660	4.32	-0.300	3.60	
2/15/2013	11:17:00	14.771	14.491	0.280	0.646	4.32	-0.286	3.43	
2/15/2013	11:32:00	14.771	14.487	0.284	0.655	4.32	-0.295	3.54	
2/15/2013	11:47:00	14.768	14.488	0.280	0.646	4.32	-0.286	3.43	
2/15/2013	12:02:00	14.766	14.487	0.279	0.644	4.32	-0.284	3.40	
2/15/2013	12:17:00	14.763	14.485	0.278	0.641	4.32	-0.281	3.38	
2/15/2013	12:32:00	14.757	14.479	0.278	0.641	4.32	-0.281	3.38	
2/15/2013	12:47:00	14.756	14.477	0.279	0.644	4.32	-0.284	3.40	
2/15/2013	13:02:00	14.753	14.472	0.281	0.648	4.32	-0.288	3.46	
2/15/2013	13:17:00	14.742	14.469	0.273	0.630	4.32	-0.270	3.24	
2/15/2013	13:32:00	14.740	14.462	0.278	0.641	4.32	-0.281	3.38	
2/15/2013	13:47:00	14.737	14.456	0.281	0.648	4.32	-0.288	3.46	
2/15/2013	14:02:00	14.731	14.455	0.276	0.637	4.32	-0.277	3.32	
2/15/2013	14:17:00	14.726	14.449	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	14:32:00	14.723	14.446	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	14:47:00	14.719	14.442	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	15:02:00	14.714	14.440	0.274	0.632	4.32	-0.272	3.27	
2/15/2013	15:17:00	14.716	14.436	0.280	0.646	4.32	-0.286	3.43	
2/15/2013	15:32:00	14.712	14.435	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	15:47:00	14.707	14.429	0.278	0.641	4.32	-0.281	3.38	
2/15/2013	16:02:00	14.705	14.434	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	16:17:00	14.709	14.428	0.281	0.648	4.32	-0.288	3.46	
2/15/2013	16:32:00	14.706	14.431	0.275	0.634	4.32	-0.274	3.29	
2/15/2013	16:47:00	14.703	14.428	0.275	0.634	4.32	-0.274	3.29	
2/15/2013	17:02:00	14.698	14.431	0.267	0.616	4.32	-0.256	3.07	
2/15/2013	17:17:00	14.706	14.426	0.280	0.646	4.32	-0.286	3.43	
2/15/2013	17:32:00	14.698	14.427	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	17:47:00	14.696	14.424	0.272	0.628	4.32	-0.268	3.21	
2/15/2013	18:02:00	14.700	14.431	0.269	0.621	4.32	-0.261	3.13	
2/15/2013	18:17:00	14.702	14.434	0.268	0.618	4.32	-0.258	3.10	
2/15/2013	18:32:00	14.706	14.435	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	18:47:00	14.714	14.434	0.280	0.646	4.32	-0.286	3.43	
2/15/2013	19:02:00	14.704	14.433	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	19:17:00	14.707	14.435	0.272	0.628	4.32	-0.268	3.21	
2/15/2013	19:32:00	14.702	14.434	0.268	0.618	4.32	-0.258	3.10	
2/15/2013	19:47:00	14.706	14.429	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	20:02:00	14.706	14.433	0.273	0.630	4.32	-0.270	3.24	
2/15/2013	20:17:00	14.706	14.433	0.273	0.630	4.32	-0.270	3.24	
2/15/2013	20:32:00	14.706	14.434	0.272	0.628	4.32	-0.268	3.21	
2/15/2013	20:47:00	14.701	14.435	0.266	0.614	4.32	-0.254	3.04	
2/15/2013	21:02:00	14.702	14.434	0.268	0.618	4.32	-0.258	3.10	
2/15/2013	21:17:00	14.703	14.431	0.272	0.628	4.32	-0.268	3.21	
2/15/2013	21:32:00	14.708	14.430	0.278	0.641	4.32	-0.281	3.38	
2/15/2013	21:47:00	14.697	14.432	0.265	0.611	4.32	-0.251	3.02	
2/15/2013	22:02:00	14.705	14.435	0.270	0.623	4.32	-0.263	3.15	
2/15/2013	22:17:00	14.700	14.428	0.272	0.628	4.32	-0.268	3.21	
2/15/2013	22:32:00	14.700	14.429	0.271	0.625	4.32	-0.265	3.18	
2/15/2013	22:47:00	14.702	14.426	0.276	0.637	4.32	-0.277	3.32	
2/15/2013	23:02:00	14.695	14.434	0.261	0.602	4.32	-0.242	2.91	
2/15/2013	23:17:00	14.701	14.432	0.269	0.621	4.32	-0.261	3.13	
2/15/2013	23:32:00	14.700	14.423	0.277	0.639	4.32	-0.279	3.35	
2/15/2013	23:47:00	14.697	14.428	0.269	0.621	4.32	-0.261	3.13	
2/16/2013	0:02:00	14.694	14.433	0.261	0.602	4.32	-0.242	2.91	
2/16/2013	0:17:00	14.698	14.428	0.270	0.623	4.32	-0.263	3.15	
2/16/2013	0:32:00	14.693	14.424	0.269	0.621	4.32	-0.261	3.13	
2/16/2013	0:47:00	14.700	14.433	0.267	0.616	4.32	-0.256	3.07	
2/16/2013	1:02:00	14.699	14.433	0.266	0.614	4.32	-0.254	3.04	
2/16/2013	1:17:00	14.703	14.439	0.264	0.609	4.32	-0.249	2.99	
2/16/2013	1:32:00	14.701	14.433	0.268	0.618	4.32	-0.258	3.10	
2/16/2013	1:47:00	14.700	14.435	0.265	0.611	4.32	-0.251	3.02	
2/16/2013	2:02:00	14.701	14.432	0.269	0.621	4.32	-0.261	3.13	
2/16/2013	2:17:00	14.698	14.430	0.268	0.618	4.32	-0.258	3.10	
2/16/2013	2:32:00	14.696	14.433	0.263	0.607	4.32	-0.247	2.96	
2/16/2013	2:47:00	14.700	14.433	0.267	0.616	4.32	-0.256	3.07	
2/16/2013	3:02:00	14.698	14.427	0.271	0.625	4.32	-0.265	3.18	
2/16/2013	3:17:00	14.695	14.441	0.254	0.586	4.32	-0.226	2.71	
2/16/2013	3:32:00	14.689	14.417	0.272	0.628	4.32	-0.268	3.21	
2/16/2013	3:47:00	14.685	14.432	0.253	0.584	4.32	-0.224	2.68	
2/16/2013	4:02:00	14.685	14.422	0.263	0.607	4.32	-0.247	2.96	
2/16/2013	4:17:00	14.683	14.423	0.260	0.600	4.32	-0.240	2.88	
2/16/2013	4:32:00	14.681	14.423	0.258	0.595	4.32	-0.235	2.82	
2/16/2013	4:47:00	14.676	14.425	0.251	0.579	4.32	-0.219	2.63	
2/16/2013	5:02:00	14.680	14.425	0.255	0.588	4.32	-0.228	2.74	
2/16/2013	5:17:00	14.687	14.425	0.262	0.604	4.32	-0.244	2.93	
2/16/2013	5:32:00	14.691	14.430	0.261	0.602	4.32	-0.242	2.91	
2/16/2013	5:47:00	14.696	14.430	0.266	0.614	4.32	-0.254	3.04	
2/16/2013	6:02:00	14.679	14.427	0.252	0.581	4.32	-0.221	2.66	
2/16/2013	6:17:00	14.695	14.423	0.272	0.628	4.32	-0.268	3.21	
2/16/2013	6:32:00	14.672	14.427	0.245	0.565	4.32	-0.205	2.46	
2/16/2013	6:47:00	14.676	14.433	0.243	0.561	4.32	-0.201	2.41	
2/16/2013	7:02:00	14.685	14.436	0.249	0.574	4.32	-0.214	2.57	
2/16/2013	7:17:00	14.683	14.433	0.250	0.577	4.32	-0.217	2.60	0.01
2/16/2013	7:32:00	14.684	14.437	0.247	0.570	4.32	-0.210	2.52	
2/16/2013	7:47:00	14.685	14.435	0.250	0.577	4.32	-0.217	2.60	
2/16/2013	8:02:00	14.693	14.435	0.258	0.595	4.32	-0.235	2.82	
2/16/2013	8:17:00	14.693	14.440	0.253	0.584	4.32	-0.224	2.68	0.03
2/16/2013	8:32:00	14.700	14.434	0.266	0.614	4.32	-0.254	3.04	0.05
2/16/2013	8:47:00	14.697	14.438	0.259	0.598	4.32	-0.238	2.85	0.06
2/16/2013	9:02:00	14.709	14.435	0.274	0.632	4.32	-0.272	3.27	0.07
2/16/2013	9:17:00	14.734	14.434	0.300	0.692	4.32	-0.332	3.99	
2/16/2013	9:32:00	14.713	14.438	0.275	0.634	4.32	-0.274	3.29	0.08
2/16/2013	9:47:00	14.727	14.438	0.289	0.667	4.32	-0.307	3.68	
2/16/2013	10:02:00	14.743	14.437	0.306	0.706	4.32	-0.346	4.15	0.09
2/16/2013	10:17:00	14.744	14.436	0.308	0.711	4.32	-0.351	4.21	
2/16/2013	10:32:00	14.737	14.431	0.306	0.706	4.32	-0.346	4.15	0.10
2/16/2013	10:47:00	14.749	14.433	0.316	0.729	4.32	-0.369	4.43	0.11

2/16/2013	11:02:00	14.765	14.433	0.332	0.766	4.32	-0.406	4.87	0.12
2/16/2013	11:17:00	14.763	14.430	0.333	0.768	4.32	-0.408	4.90	0.13
2/16/2013	11:32:00	14.782	14.426	0.356	0.821	4.32	-0.461	5.54	0.14
2/16/2013	11:47:00	14.773	14.429	0.344	0.794	4.32	-0.434	5.20	
2/16/2013	12:02:00	14.768	14.420	0.348	0.803	4.32	-0.443	5.31	
2/16/2013	12:17:00	14.779	14.415	0.364	0.840	4.32	-0.480	5.76	
2/16/2013	12:32:00	14.753	14.411	0.342	0.789	4.32	-0.429	5.15	0.15
2/16/2013	12:47:00	14.756	14.406	0.350	0.807	4.32	-0.447	5.37	
2/16/2013	13:02:00	14.768	14.407	0.361	0.833	4.32	-0.473	5.67	0.16
2/16/2013	13:17:00	14.763	14.395	0.368	0.849	4.32	-0.489	5.87	
2/16/2013	13:32:00	14.770	14.402	0.368	0.849	4.32	-0.489	5.87	
2/16/2013	13:47:00	14.764	14.394	0.370	0.854	4.32	-0.494	5.92	0.17
2/16/2013	14:02:00	14.759	14.388	0.371	0.856	4.32	-0.496	5.95	
2/16/2013	14:17:00	14.753	14.379	0.374	0.863	4.32	-0.503	6.03	
2/16/2013	14:32:00	14.745	14.385	0.360	0.831	4.32	-0.471	5.65	
2/16/2013	14:47:00	14.747	14.386	0.361	0.833	4.32	-0.473	5.67	
2/16/2013	15:02:00	14.743	14.384	0.359	0.828	4.32	-0.468	5.62	
2/16/2013	15:17:00	14.742	14.378	0.364	0.840	4.32	-0.480	5.76	
2/16/2013	15:32:00	14.731	14.379	0.352	0.812	4.32	-0.452	5.42	
2/16/2013	15:47:00	14.725	14.383	0.342	0.789	4.32	-0.429	5.15	
2/16/2013	16:02:00	14.724	14.389	0.335	0.773	4.32	-0.413	4.95	
2/16/2013	16:17:00	14.721	14.369	0.352	0.812	4.32	-0.452	5.42	
2/16/2013	16:32:00	14.720	14.378	0.342	0.789	4.32	-0.429	5.15	
2/16/2013	16:47:00	14.720	14.383	0.337	0.777	4.32	-0.417	5.01	
2/16/2013	17:02:00	14.714	14.379	0.335	0.773	4.32	-0.413	4.95	
2/16/2013	17:17:00	14.710	14.379	0.331	0.764	4.32	-0.404	4.84	
2/16/2013	17:32:00	14.712	14.384	0.328	0.757	4.32	-0.397	4.76	
2/16/2013	17:47:00	14.709	14.385	0.324	0.747	4.32	-0.387	4.65	
2/16/2013	18:02:00	14.707	14.384	0.323	0.745	4.32	-0.385	4.62	
2/16/2013	18:17:00	14.716	14.389	0.327	0.754	4.32	-0.394	4.73	
2/16/2013	18:32:00	14.714	14.397	0.317	0.731	4.32	-0.371	4.46	
2/16/2013	18:47:00	14.727	14.404	0.323	0.745	4.32	-0.385	4.62	
2/16/2013	19:02:00	14.734	14.402	0.332	0.766	4.32	-0.406	4.87	
2/16/2013	19:17:00	14.742	14.411	0.331	0.764	4.32	-0.404	4.84	0.18
2/16/2013	19:32:00	14.741	14.412	0.329	0.759	4.32	-0.399	4.79	
2/16/2013	19:47:00	14.761	14.420	0.341	0.787	4.32	-0.427	5.12	0.20
2/16/2013	20:02:00	14.762	14.419	0.343	0.791	4.32	-0.431	5.18	
2/16/2013	20:17:00	14.757	14.421	0.336	0.775	4.32	-0.415	4.98	
2/16/2013	20:32:00	14.787	14.423	0.364	0.840	4.32	-0.480	5.76	
2/16/2013	20:47:00	14.780	14.427	0.353	0.814	4.32	-0.454	5.45	
2/16/2013	21:02:00	14.780	14.426	0.354	0.817	4.32	-0.457	5.48	
2/16/2013	21:17:00	14.792	14.435	0.357	0.824	4.32	-0.464	5.56	
2/16/2013	21:32:00	14.791	14.436	0.355	0.819	4.32	-0.459	5.51	
2/16/2013	21:47:00	14.791	14.439	0.352	0.812	4.32	-0.452	5.42	
2/16/2013	22:02:00	14.794	14.442	0.352	0.812	4.32	-0.452	5.42	
2/16/2013	22:17:00	14.805	14.437	0.368	0.849	4.32	-0.489	5.87	
2/16/2013	22:32:00	14.797	14.446	0.351	0.810	4.32	-0.450	5.40	
2/16/2013	22:47:00	14.807	14.442	0.365	0.842	4.32	-0.482	5.78	
2/16/2013	23:02:00	14.795	14.448	0.347	0.801	4.32	-0.441	5.29	
2/16/2013	23:17:00	14.793	14.447	0.346	0.798	4.32	-0.438	5.26	
2/16/2013	23:32:00	14.792	14.454	0.338	0.780	4.32	-0.420	5.04	
2/16/2013	23:47:00	14.791	14.451	0.340	0.784	4.32	-0.424	5.09	
2/17/2013	0:02:00	14.797	14.458	0.339	0.782	4.32	-0.422	5.06	
2/17/2013	0:17:00	14.802	14.457	0.345	0.796	4.32	-0.436	5.23	
2/17/2013	0:32:00	14.793	14.459	0.334	0.771	4.32	-0.411	4.93	
2/17/2013	0:47:00	14.800	14.458	0.342	0.789	4.32	-0.429	5.15	
2/17/2013	1:02:00	14.792	14.460	0.332	0.766	4.32	-0.406	4.87	
2/17/2013	1:17:00	14.804	14.465	0.339	0.782	4.32	-0.422	5.06	
2/17/2013	1:32:00	14.793	14.468	0.325	0.750	4.32	-0.390	4.68	
2/17/2013	1:47:00	14.796	14.463	0.333	0.768	4.32	-0.408	4.90	
2/17/2013	2:02:00	14.789	14.465	0.324	0.747	4.32	-0.387	4.65	
2/17/2013	2:17:00	14.790	14.467	0.323	0.745	4.32	-0.385	4.62	
2/17/2013	2:32:00	14.780	14.467	0.313	0.722	4.32	-0.362	4.35	
2/17/2013	2:47:00	14.792	14.471	0.321	0.741	4.32	-0.381	4.57	
2/17/2013	3:02:00	14.789	14.471	0.318	0.734	4.32	-0.374	4.48	
2/17/2013	3:17:00	14.787	14.474	0.313	0.722	4.32	-0.362	4.35	
2/17/2013	3:32:00	14.788	14.480	0.308	0.711	4.32	-0.351	4.21	
2/17/2013	3:47:00	14.788	14.478	0.310	0.715	4.32	-0.355	4.26	
2/17/2013	4:02:00	14.787	14.483	0.304	0.701	4.32	-0.341	4.10	
2/17/2013	4:17:00	14.788	14.482	0.306	0.706	4.32	-0.346	4.15	
2/17/2013	4:32:00	14.788	14.487	0.301	0.694	4.32	-0.334	4.01	
2/17/2013	4:47:00	14.787	14.492	0.295	0.681	4.32	-0.321	3.85	
2/17/2013	5:02:00	14.802	14.492	0.310	0.715	4.32	-0.355	4.26	
2/17/2013	5:17:00	14.795	14.495	0.300	0.692	4.32	-0.332	3.99	
2/17/2013	5:32:00	14.801	14.499	0.302	0.697	4.32	-0.337	4.04	
2/17/2013	5:47:00	14.803	14.500	0.303	0.699	4.32	-0.339	4.07	
2/17/2013	6:02:00	14.802	14.502	0.300	0.692	4.32	-0.332	3.99	
2/17/2013	6:17:00	14.808	14.506	0.302	0.697	4.32	-0.337	4.04	
2/17/2013	6:32:00	14.813	14.511	0.302	0.697	4.32	-0.337	4.04	
2/17/2013	6:47:00	14.812	14.510	0.302	0.697	4.32	-0.337	4.04	
2/17/2013	7:02:00	14.814	14.515	0.299	0.690	4.32	-0.330	3.96	
2/17/2013	7:17:00	14.816	14.519	0.297	0.685	4.32	-0.325	3.90	
2/17/2013	7:32:00	14.813	14.519	0.294	0.678	4.32	-0.318	3.82	
2/17/2013	7:47:00	14.816	14.519	0.297	0.685	4.32	-0.325	3.90	
2/17/2013	8:02:00	14.826	14.534	0.292	0.674	4.32	-0.314	3.76	
2/17/2013	8:17:00	14.833	14.531	0.302	0.697	4.32	-0.337	4.04	
2/17/2013	8:32:00	14.832	14.536	0.296	0.683	4.32	-0.323	3.87	
2/17/2013	8:47:00	14.825	14.533	0.292	0.674	4.32	-0.314	3.76	
2/17/2013	9:02:00	14.829	14.537	0.292	0.674	4.32	-0.314	3.76	
2/17/2013	9:17:00	14.830	14.536	0.294	0.678	4.32	-0.318	3.82	
2/17/2013	9:32:00	14.842	14.542	0.300	0.692	4.32	-0.332	3.99	
2/17/2013	9:47:00	14.844	14.542	0.302	0.697	4.32	-0.337	4.04	
2/17/2013	10:02:00	14.838	14.535	0.303	0.699	4.32	-0.339	4.07	
2/17/2013	10:17:00	14.851	14.546	0.305	0.704	4.32	-0.344	4.12	
2/17/2013	10:32:00	14.853	14.553	0.300	0.692	4.32	-0.332	3.99	
2/17/2013	10:47:00	14.853	14.552	0.301	0.694	4.32	-0.334	4.01	
2/17/2013	11:02:00	14.841	14.546	0.295	0.681	4.32	-0.321	3.85	0.01
2/17/2013	11:17:00	14.850	14.542	0.308	0.711	4.32	-0.351	4.21	
2/17/2013	11:32:00	14.850	14.542	0.308	0.711	4.32	-0.351	4.21	
2/17/2013	11:47:00	14.850	14.547	0.303	0.699	4.32	-0.339	4.07	0.02
2/17/2013	12:02:00	14.851	14.542	0.309	0.713	4.32	-0.353	4.23	
2/17/2013	12:17:00	14.846	14.537	0.309	0.713	4.32	-0.353	4.23	0.03
2/17/2013	12:32:00	14.846	14.538	0.308	0.711	4.32	-0.351	4.21	
2/17/2013	12:47:00	14.849	14.534	0.315	0.727	4.32	-0.367	4.40	
2/17/2013	13:02:00	14.845	14.535	0.310	0.715	4.32	-0.355	4.26	
2/17/2013	13:17:00	14.842	14.533	0.309	0.713	4.32	-0.353	4.23	
2/17/2013	13:32:00	14.842	14.528	0.314	0.724	4.32	-0.364	4.37	
2/17/2013	13:47:00	14.838	14.527	0.311	0.717	4.32	-0.357	4.29	
2/17/2013	14:02:00	14.845	14.524	0.321	0.741	4.32	-0.381	4.57	
2/17/2013	14:17:00	14.833	14.533	0.300	0.692	4.32	-0.332	3.99	
2/17/2013	14:32:00	14.835	14.527	0.308	0.711	4.32	-0.351	4.21	
2/17/2013	14:47:00	14.829	14.527	0.302	0.697	4.32	-0.337	4.04	
2/17/2013	15:02:00	14.824	14.519	0.305	0.704	4.32	-0.344	4.12	
2/17/2013	15:17:00	14.827	14.524	0.303	0.699	4.32	-0.339	4.07	
2/17/2013	15:32:00	14.832	14.527	0.305	0.704	4.32	-0.344	4.12	
2/17/2013	15:47:00	14.828	14.528	0.300	0.692	4.32	-0.332	3.99	
2/17/2013	16:02:00	14.826	14.527	0.299	0.690	4.32	-0.330	3.96	
2/17/2013	16:17:00	14.832	14.527	0.305	0.704	4.32	-0.344	4.12	
2/17/2013	16:32:00	14.824	14.527	0.297	0.685	4.32	-0.325	3.90	
2/17/2013	16:47:00	14.828	14.528	0.300	0.692	4.32	-0.332	3.99	
2/17/2013	17:02:00	14.833	14.529	0.304	0.701	4.32	-0.341	4.10	
2/17/2013	17:17:00	14.831	14.532	0.299	0.690	4.32	-0.330	3.96	
2/17/2013	17:32:00	14.838	14.533	0.305	0.704	4.32	-0.344	4.12	
2/17/2013	17:47:00	14.836	14.547	0.289	0.667	4.32	-0.307	3.68	
2/17/2013	18:02:00	14.833	14.541	0.292	0.674	4.32	-0.314	3.76	
2/17/2013	18:17:00	14.836	14.545	0.291	0.671	4.32	-0.311	3.74	
2/17/2013	18:32:00	14.841	14.545	0.296	0.683	4.32	-0.323	3.87	
2/17/2013	18:47:00	14.840	14.547	0.293	0.676	4.32	-0.316	3.79	
2/17/2013	19:02:00	14.844	14.548	0.296	0.683	4.32	-0.323	3.87	
2/17/2013	19:17:00	14.844	14.552	0.292	0.674	4.32	-0.314	3.76	
2/17/2013	19:32:00	14.849	14.560	0.289	0.667	4.32	-0.307	3.68	
2/17/2013	19:47:00	14.849	14.562	0.287	0.662	4.32	-0.302	3.63	
2/17/2013	20:02:00	14.848	14.560	0.288	0.664	4.32	-0.304	3.65	

2/17/2013	20:17:00	14.851	14.562	0.289	0.667	4.32	-0.307	3.68
2/17/2013	20:32:00	14.854	14.568	0.286	0.660	4.32	-0.300	3.60
2/17/2013	20:47:00	14.854	14.566	0.288	0.664	4.32	-0.304	3.65
2/17/2013	21:02:00	14.846	14.568	0.278	0.641	4.32	-0.281	3.38
2/17/2013	21:17:00	14.860	14.570	0.290	0.669	4.32	-0.309	3.71
2/17/2013	21:32:00	14.873	14.576	0.297	0.685	4.32	-0.325	3.90
2/17/2013	21:47:00	14.862	14.577	0.285	0.657	4.32	-0.297	3.57
2/17/2013	22:02:00	14.869	14.580	0.289	0.667	4.32	-0.307	3.68
2/17/2013	22:17:00	14.867	14.586	0.281	0.648	4.32	-0.288	3.46
2/17/2013	22:32:00	14.872	14.590	0.282	0.651	4.32	-0.291	3.49
2/17/2013	22:47:00	14.869	14.589	0.280	0.646	4.32	-0.286	3.43
2/17/2013	23:02:00	14.877	14.592	0.285	0.657	4.32	-0.297	3.57
2/17/2013	23:17:00	14.877	14.592	0.285	0.657	4.32	-0.297	3.57
2/17/2013	23:32:00	14.878	14.595	0.283	0.653	4.32	-0.293	3.51
2/17/2013	23:47:00	14.880	14.595	0.285	0.657	4.32	-0.297	3.57
2/18/2013	0:02:00	14.882	14.596	0.286	0.660	4.32	-0.300	3.60
2/18/2013	0:17:00	14.881	14.594	0.287	0.662	4.32	-0.302	3.63
2/18/2013	0:32:00	14.879	14.599	0.280	0.646	4.32	-0.286	3.43
2/18/2013	0:47:00	14.880	14.599	0.281	0.648	4.32	-0.288	3.46
2/18/2013	1:02:00	14.882	14.598	0.284	0.655	4.32	-0.295	3.54
2/18/2013	1:17:00	14.882	14.604	0.278	0.641	4.32	-0.281	3.38
2/18/2013	1:32:00	14.886	14.605	0.281	0.648	4.32	-0.288	3.46
2/18/2013	1:47:00	14.885	14.606	0.279	0.644	4.32	-0.284	3.40
2/18/2013	2:02:00	14.885	14.605	0.280	0.646	4.32	-0.286	3.43
2/18/2013	2:17:00	14.888	14.610	0.278	0.641	4.32	-0.281	3.38
2/18/2013	2:32:00	14.887	14.614	0.273	0.630	4.32	-0.270	3.24
2/18/2013	2:47:00	14.892	14.612	0.280	0.646	4.32	-0.286	3.43
2/18/2013	3:02:00	14.891	14.617	0.274	0.632	4.32	-0.272	3.27
2/18/2013	3:17:00	14.892	14.614	0.278	0.641	4.32	-0.281	3.38
2/18/2013	3:32:00	14.890	14.611	0.279	0.644	4.32	-0.284	3.40
2/18/2013	3:47:00	14.891	14.614	0.277	0.639	4.32	-0.279	3.35
2/18/2013	4:02:00	14.886	14.616	0.270	0.623	4.32	-0.263	3.15
2/18/2013	4:17:00	14.889	14.617	0.272	0.628	4.32	-0.268	3.21
2/18/2013	4:32:00	14.890	14.621	0.269	0.621	4.32	-0.261	3.13
2/18/2013	4:47:00	14.896	14.624	0.272	0.628	4.32	-0.268	3.21
2/18/2013	5:02:00	14.899	14.626	0.273	0.630	4.32	-0.270	3.24
2/18/2013	5:17:00	14.894	14.629	0.265	0.611	4.32	-0.251	3.02
2/18/2013	5:32:00	14.902	14.632	0.270	0.623	4.32	-0.263	3.15
2/18/2013	5:47:00	14.900	14.631	0.269	0.621	4.32	-0.261	3.13
2/18/2013	6:02:00	14.901	14.634	0.267	0.616	4.32	-0.256	3.07
2/18/2013	6:17:00	14.907	14.640	0.267	0.616	4.32	-0.256	3.07
2/18/2013	6:32:00	14.910	14.640	0.270	0.623	4.32	-0.263	3.15
2/18/2013	6:47:00	14.910	14.641	0.269	0.621	4.32	-0.261	3.13
2/18/2013	7:02:00	14.913	14.646	0.267	0.616	4.32	-0.256	3.07
2/18/2013	7:17:00	14.914	14.651	0.263	0.607	4.32	-0.247	2.96
2/18/2013	7:32:00	14.917	14.653	0.264	0.609	4.32	-0.249	2.99
2/18/2013	7:47:00	14.918	14.658	0.260	0.600	4.32	-0.240	2.88
2/18/2013	8:02:00	14.920	14.640	0.280	0.646	4.32	-0.286	3.43
2/18/2013	8:17:00	14.920	14.655	0.265	0.611	4.32	-0.251	3.02
2/18/2013	8:32:00	14.923	14.645	0.278	0.641	4.32	-0.281	3.38
2/18/2013	8:47:00	14.927	14.648	0.279	0.644	4.32	-0.284	3.40
2/18/2013	9:02:00	14.930	14.651	0.279	0.644	4.32	-0.284	3.40
2/18/2013	9:17:00	14.927	14.645	0.282	0.651	4.32	-0.291	3.49
2/18/2013	9:32:00	14.920	14.647	0.273	0.630	4.32	-0.270	3.24
2/18/2013	9:47:00	14.919	14.652	0.267	0.616	4.32	-0.256	3.07
2/18/2013	10:02:00	14.924	14.653	0.271	0.625	4.32	-0.265	3.18
2/18/2013	10:17:00	14.939	14.644	0.295	0.681	4.32	-0.321	3.85
2/18/2013	10:32:00	14.918	14.647	0.271	0.625	4.32	-0.265	3.18
2/18/2013	10:47:00	14.936	14.646	0.290	0.669	4.32	-0.309	3.71
2/18/2013	11:02:00	14.935	14.642	0.293	0.676	4.32	-0.316	3.79
2/18/2013	11:17:00	14.934	14.645	0.289	0.667	4.32	-0.307	3.68
2/18/2013	11:32:00	14.926	14.638	0.288	0.664	4.32	-0.304	3.65
2/18/2013	11:47:00	14.929	14.639	0.290	0.669	4.32	-0.309	3.71
2/18/2013	12:02:00	14.925	14.634	0.291	0.671	4.32	-0.311	3.74
2/18/2013	12:17:00	14.914	14.634	0.280	0.646	4.32	-0.286	3.43
2/18/2013	12:32:00	14.913	14.623	0.290	0.669	4.32	-0.309	3.71
2/18/2013	12:47:00	14.907	14.623	0.284	0.655	4.32	-0.295	3.54
2/18/2013	13:02:00	14.903	14.615	0.288	0.664	4.32	-0.304	3.65
2/18/2013	13:17:00	14.896	14.608	0.288	0.664	4.32	-0.304	3.65
2/18/2013	13:32:00	14.901	14.608	0.293	0.676	4.32	-0.316	3.79
2/18/2013	13:47:00	14.889	14.609	0.280	0.646	4.32	-0.286	3.43
2/18/2013	14:02:00	14.890	14.615	0.275	0.634	4.32	-0.274	3.29
2/18/2013	14:17:00	14.888	14.607	0.281	0.648	4.32	-0.288	3.46
2/18/2013	14:32:00	14.881	14.604	0.277	0.639	4.32	-0.279	3.35
2/18/2013	14:47:00	14.885	14.604	0.281	0.648	4.32	-0.288	3.46
2/18/2013	15:02:00	14.878	14.599	0.279	0.644	4.32	-0.284	3.40
2/18/2013	15:17:00	14.880	14.597	0.283	0.653	4.32	-0.293	3.51
2/18/2013	15:32:00	14.876	14.596	0.280	0.646	4.32	-0.286	3.43
2/18/2013	15:47:00	14.875	14.593	0.282	0.651	4.32	-0.291	3.49
2/18/2013	16:02:00	14.871	14.591	0.280	0.646	4.32	-0.286	3.43
2/18/2013	16:17:00	14.868	14.594	0.274	0.632	4.32	-0.272	3.27
2/18/2013	16:32:00	14.868	14.590	0.278	0.641	4.32	-0.281	3.38
2/18/2013	16:47:00	14.867	14.589	0.278	0.641	4.32	-0.281	3.38
2/18/2013	17:02:00	14.869	14.590	0.279	0.644	4.32	-0.284	3.40
2/18/2013	17:17:00	14.869	14.594	0.275	0.634	4.32	-0.274	3.29
2/18/2013	17:32:00	14.867	14.594	0.273	0.630	4.32	-0.270	3.24
2/18/2013	17:47:00	14.872	14.593	0.279	0.644	4.32	-0.284	3.40
2/18/2013	18:02:00	14.872	14.600	0.272	0.628	4.32	-0.268	3.21
2/18/2013	18:17:00	14.875	14.594	0.281	0.648	4.32	-0.288	3.46
2/18/2013	18:32:00	14.874	14.594	0.280	0.646	4.32	-0.286	3.43
2/18/2013	18:47:00	14.877	14.596	0.281	0.648	4.32	-0.288	3.46
2/18/2013	19:02:00	14.864	14.591	0.273	0.630	4.32	-0.270	3.24
2/18/2013	19:17:00	14.872	14.590	0.282	0.651	4.32	-0.291	3.49
2/18/2013	19:32:00	14.874	14.583	0.291	0.671	4.32	-0.311	3.74
2/18/2013	19:47:00	14.872	14.593	0.279	0.644	4.32	-0.284	3.40
2/18/2013	20:02:00	14.868	14.595	0.273	0.630	4.32	-0.270	3.24
2/18/2013	20:17:00	14.872	14.591	0.281	0.648	4.32	-0.288	3.46
2/18/2013	20:32:00	14.870	14.588	0.282	0.651	4.32	-0.291	3.49
2/18/2013	20:47:00	14.863	14.591	0.272	0.628	4.32	-0.268	3.21
2/18/2013	21:02:00	14.866	14.578	0.288	0.664	4.32	-0.304	3.65
2/18/2013	21:17:00	14.862	14.601	0.261	0.602	4.32	-0.242	2.91
2/18/2013	21:32:00	14.863	14.596	0.267	0.616	4.32	-0.256	3.07
2/18/2013	21:47:00	14.861	14.579	0.282	0.651	4.32	-0.291	3.49
2/18/2013	22:02:00	14.861	14.587	0.274	0.632	4.32	-0.272	3.27
2/18/2013	22:17:00	14.855	14.591	0.264	0.609	4.32	-0.249	2.99
2/18/2013	22:32:00	14.861	14.604	0.257	0.593	4.32	-0.233	2.79
2/18/2013	22:47:00	14.863	14.602	0.261	0.602	4.32	-0.242	2.91
2/18/2013	23:02:00	14.854	14.583	0.271	0.625	4.32	-0.265	3.18
2/18/2013	23:17:00	14.851	14.580	0.271	0.625	4.32	-0.265	3.18
2/18/2013	23:32:00	14.851	14.579	0.272	0.628	4.32	-0.268	3.21
2/18/2013	23:47:00	14.846	14.579	0.267	0.616	4.32	-0.256	3.07
2/19/2013	0:02:00	14.845	14.575	0.270	0.623	4.32	-0.263	3.15
2/19/2013	0:17:00	14.842	14.572	0.270	0.623	4.32	-0.263	3.15
2/19/2013	0:32:00	14.840	14.568	0.272	0.628	4.32	-0.268	3.21
2/19/2013	0:47:00	14.828	14.573	0.255	0.588	4.32	-0.228	2.74
2/19/2013	1:02:00	14.838	14.575	0.263	0.607	4.32	-0.247	2.96
2/19/2013	1:17:00	14.847	14.572	0.275	0.634	4.32	-0.274	3.29
2/19/2013	1:32:00	14.824	14.566	0.258	0.595	4.32	-0.235	2.82
2/19/2013	1:47:00	14.830	14.566	0.264	0.609	4.32	-0.249	2.99
2/19/2013	2:02:00	14.829	14.563	0.266	0.614	4.32	-0.254	3.04
2/19/2013	2:17:00	14.822	14.553	0.269	0.621	4.32	-0.261	3.13
2/19/2013	2:32:00	14.817	14.546	0.271	0.625	4.32	-0.265	3.18
2/19/2013	2:47:00	14.815	14.543	0.272	0.628	4.32	-0.268	3.21
2/19/2013	3:02:00	14.814	14.538	0.276	0.637	4.32	-0.277	3.32
2/19/2013	3:17:00	14.803	14.537	0.266	0.614	4.32	-0.254	3.04
2/19/2013	3:32:00	14.806	14.535	0.271	0.625	4.32	-0.265	3.18
2/19/2013	3:47:00	14.801	14.529	0.272	0.628	4.32	-0.268	3.21
2/19/2013	4:02:00	14.793	14.525	0.268	0.618	4.32	-0.258	3.10
2/19/2013	4:17:00	14.792	14.526	0.266	0.614	4.32	-0.254	3.04
2/19/2013	4:32:00	14.792	14.522	0.270	0.623	4.32	-0.263	3.15
2/19/2013	4:47:00	14.786	14.516	0.270	0.623	4.32	-0.263	3.15
2/19/2013	5:02:00	14.788	14.522	0.266	0.614	4.32	-0.254	3.04
2/19/2013	5:17:00	14.784	14.517	0.267	0.616	4.32	-0.256	3.07

2/19/2013	5:32:00	14.781	14.516	0.265	0.611	4.32	-0.251	3.02	
2/19/2013	5:47:00	14.780	14.514	0.266	0.614	4.32	-0.254	3.04	
2/19/2013	6:02:00	14.784	14.513	0.271	0.625	4.32	-0.265	3.18	
2/19/2013	6:17:00	14.785	14.521	0.264	0.609	4.32	-0.249	2.99	
2/19/2013	6:32:00	14.787	14.516	0.271	0.625	4.32	-0.265	3.18	
2/19/2013	6:47:00	14.782	14.519	0.263	0.607	4.32	-0.247	2.96	
2/19/2013	7:02:00	14.785	14.514	0.271	0.625	4.32	-0.265	3.18	
2/19/2013	7:17:00	14.786	14.509	0.277	0.639	4.32	-0.279	3.35	
2/19/2013	7:32:00	14.777	14.504	0.273	0.630	4.32	-0.270	3.24	
2/19/2013	7:47:00	14.774	14.516	0.258	0.595	4.32	-0.235	2.82	
2/19/2013	8:02:00	14.769	14.514	0.255	0.588	4.32	-0.228	2.74	
2/19/2013	8:17:00	14.766	14.496	0.270	0.623	4.32	-0.263	3.15	
2/19/2013	8:32:00	14.768	14.503	0.265	0.611	4.32	-0.251	3.02	
2/19/2013	8:47:00	14.775	14.505	0.270	0.623	4.32	-0.263	3.15	
2/19/2013	9:02:00	14.776	14.507	0.269	0.621	4.32	-0.261	3.13	
2/19/2013	9:17:00	14.772	14.497	0.275	0.634	4.32	-0.274	3.29	
2/19/2013	9:32:00	14.782	14.501	0.281	0.648	4.32	-0.288	3.46	0.01
2/19/2013	9:47:00	14.758	14.494	0.264	0.609	4.32	-0.249	2.99	0.03
2/19/2013	10:02:00	14.786	14.492	0.294	0.678	4.32	-0.318	3.82	0.04
2/19/2013	10:17:00	14.782	14.485	0.297	0.685	4.32	-0.325	3.90	0.08
2/19/2013	10:32:00	14.783	14.480	0.303	0.699	4.32	-0.339	4.07	
2/19/2013	10:47:00	14.775	14.482	0.293	0.676	4.32	-0.316	3.79	0.10
2/19/2013	11:02:00	14.776	14.477	0.299	0.690	4.32	-0.330	3.96	
2/19/2013	11:17:00	14.788	14.476	0.312	0.720	4.32	-0.360	4.32	0.12
2/19/2013	11:32:00	14.784	14.466	0.318	0.734	4.32	-0.374	4.48	0.13
2/19/2013	11:47:00	14.781	14.461	0.320	0.738	4.32	-0.378	4.54	0.14
2/19/2013	12:02:00	14.778	14.461	0.317	0.731	4.32	-0.371	4.46	
2/19/2013	12:17:00	14.774	14.461	0.313	0.722	4.32	-0.362	4.35	0.16
2/19/2013	12:32:00	14.777	14.460	0.317	0.731	4.32	-0.371	4.46	
2/19/2013	12:47:00	14.776	14.439	0.337	0.777	4.32	-0.417	5.01	
2/19/2013	13:02:00	14.777	14.444	0.333	0.768	4.32	-0.408	4.90	0.17
2/19/2013	13:17:00	14.774	14.442	0.332	0.766	4.32	-0.406	4.87	0.18
2/19/2013	13:32:00	14.782	14.443	0.339	0.782	4.32	-0.422	5.06	0.19
2/19/2013	13:47:00	14.790	14.435	0.355	0.819	4.32	-0.459	5.51	
2/19/2013	14:02:00	14.795	14.430	0.365	0.842	4.32	-0.482	5.78	
2/19/2013	14:17:00	14.801	14.432	0.369	0.851	4.32	-0.491	5.90	
2/19/2013	14:32:00	14.812	14.423	0.389	0.897	4.32	-0.537	6.45	
2/19/2013	14:47:00	14.804	14.428	0.376	0.867	4.32	-0.507	6.09	
2/19/2013	15:02:00	14.799	14.417	0.382	0.881	4.32	-0.521	6.26	
2/19/2013	15:17:00	14.796	14.417	0.379	0.874	4.32	-0.514	6.17	
2/19/2013	15:32:00	14.795	14.412	0.383	0.884	4.32	-0.524	6.28	
2/19/2013	15:47:00	14.793	14.416	0.377	0.870	4.32	-0.510	6.12	
2/19/2013	16:02:00	14.783	14.411	0.372	0.858	4.32	-0.498	5.98	
2/19/2013	16:17:00	14.781	14.407	0.374	0.863	4.32	-0.503	6.03	
2/19/2013	16:32:00	14.778	14.410	0.368	0.849	4.32	-0.489	5.87	
2/19/2013	16:47:00	14.770	14.406	0.364	0.840	4.32	-0.480	5.76	
2/19/2013	17:02:00	14.765	14.406	0.359	0.828	4.32	-0.468	5.62	
2/19/2013	17:17:00	14.765	14.412	0.353	0.814	4.32	-0.454	5.45	
2/19/2013	17:32:00	14.762	14.413	0.349	0.805	4.32	-0.445	5.34	
2/19/2013	17:47:00	14.763	14.425	0.338	0.780	4.32	-0.420	5.04	
2/19/2013	18:02:00	14.767	14.425	0.342	0.789	4.32	-0.429	5.15	
2/19/2013	18:17:00	14.762	14.420	0.342	0.789	4.32	-0.429	5.15	
2/19/2013	18:32:00	14.768	14.426	0.342	0.789	4.32	-0.429	5.15	
2/19/2013	18:47:00	14.766	14.429	0.337	0.777	4.32	-0.417	5.01	
2/19/2013	19:02:00	14.768	14.430	0.338	0.780	4.32	-0.420	5.04	
2/19/2013	19:17:00	14.768	14.434	0.334	0.771	4.32	-0.411	4.93	
2/19/2013	19:32:00	14.771	14.442	0.329	0.759	4.32	-0.399	4.79	
2/19/2013	19:47:00	14.772	14.441	0.331	0.764	4.32	-0.404	4.84	
2/19/2013	20:02:00	14.768	14.425	0.343	0.791	4.32	-0.431	5.18	
2/19/2013	20:17:00	14.768	14.435	0.333	0.768	4.32	-0.408	4.90	
2/19/2013	20:32:00	14.765	14.439	0.326	0.752	4.32	-0.392	4.70	
2/19/2013	20:47:00	14.765	14.440	0.325	0.750	4.32	-0.390	4.68	
2/19/2013	21:02:00	14.761	14.442	0.319	0.736	4.32	-0.376	4.51	
2/19/2013	21:17:00	14.765	14.442	0.323	0.745	4.32	-0.385	4.62	
2/19/2013	21:32:00	14.764	14.447	0.317	0.731	4.32	-0.371	4.46	
2/19/2013	21:47:00	14.769	14.450	0.319	0.736	4.32	-0.376	4.51	
2/19/2013	22:02:00	14.766	14.453	0.313	0.722	4.32	-0.362	4.35	
2/19/2013	22:17:00	14.768	14.455	0.313	0.722	4.32	-0.362	4.35	
2/19/2013	22:32:00	14.763	14.454	0.309	0.713	4.32	-0.353	4.23	
2/19/2013	22:47:00	14.770	14.460	0.310	0.715	4.32	-0.355	4.26	
2/19/2013	23:02:00	14.763	14.457	0.306	0.706	4.32	-0.346	4.15	
2/19/2013	23:17:00	14.760	14.458	0.302	0.697	4.32	-0.337	4.04	
2/19/2013	23:32:00	14.774	14.460	0.314	0.724	4.32	-0.364	4.37	
2/19/2013	23:47:00	14.763	14.461	0.302	0.697	4.32	-0.337	4.04	
2/20/2013	0:02:00	14.776	14.464	0.312	0.720	4.32	-0.360	4.32	
2/20/2013	0:17:00	14.778	14.467	0.311	0.717	4.32	-0.357	4.29	
2/20/2013	0:32:00	14.779	14.465	0.314	0.724	4.32	-0.364	4.37	
2/20/2013	0:47:00	14.783	14.475	0.308	0.711	4.32	-0.351	4.21	
2/20/2013	1:02:00	14.783	14.478	0.305	0.704	4.32	-0.344	4.12	
2/20/2013	1:17:00	14.782	14.480	0.302	0.697	4.32	-0.337	4.04	
2/20/2013	1:32:00	14.783	14.478	0.305	0.704	4.32	-0.344	4.12	
2/20/2013	1:47:00	14.787	14.481	0.306	0.706	4.32	-0.346	4.15	
2/20/2013	2:02:00	14.785	14.477	0.308	0.711	4.32	-0.351	4.21	
2/20/2013	2:17:00	14.780	14.476	0.304	0.701	4.32	-0.341	4.10	
2/20/2013	2:32:00	14.778	14.477	0.301	0.694	4.32	-0.334	4.01	
2/20/2013	2:47:00	14.779	14.475	0.304	0.701	4.32	-0.341	4.10	
2/20/2013	3:02:00	14.777	14.477	0.300	0.692	4.32	-0.332	3.99	
2/20/2013	3:17:00	14.784	14.480	0.304	0.701	4.32	-0.341	4.10	
2/20/2013	3:32:00	14.783	14.482	0.301	0.694	4.32	-0.334	4.01	
2/20/2013	3:47:00	14.776	14.479	0.297	0.685	4.32	-0.325	3.90	
2/20/2013	4:02:00	14.784	14.482	0.302	0.697	4.32	-0.337	4.04	
2/20/2013	4:17:00	14.779	14.483	0.296	0.683	4.32	-0.323	3.87	
2/20/2013	4:32:00	14.782	14.488	0.294	0.678	4.32	-0.318	3.82	
2/20/2013	4:47:00	14.788	14.489	0.299	0.690	4.32	-0.330	3.96	
2/20/2013	5:02:00	14.787	14.491	0.296	0.683	4.32	-0.323	3.87	
2/20/2013	5:17:00	14.784	14.489	0.295	0.681	4.32	-0.321	3.85	
2/20/2013	5:32:00	14.790	14.492	0.298	0.687	4.32	-0.327	3.93	
2/20/2013	5:47:00	14.786	14.497	0.289	0.667	4.32	-0.307	3.68	
2/20/2013	6:02:00	14.793	14.495	0.298	0.687	4.32	-0.327	3.93	
2/20/2013	6:17:00	14.795	14.494	0.301	0.694	4.32	-0.334	4.01	
2/20/2013	6:32:00	14.791	14.497	0.294	0.678	4.32	-0.318	3.82	
2/20/2013	6:47:00	14.795	14.503	0.292	0.674	4.32	-0.314	3.76	
2/20/2013	7:02:00	14.798	14.505	0.293	0.676	4.32	-0.316	3.79	
2/20/2013	7:17:00	14.806	14.513	0.293	0.676	4.32	-0.316	3.79	
2/20/2013	7:32:00	14.808	14.511	0.297	0.685	4.32	-0.325	3.90	
2/20/2013	7:47:00	14.807	14.505	0.302	0.697	4.32	-0.337	4.04	
2/20/2013	8:02:00	14.806	14.511	0.295	0.681	4.32	-0.321	3.85	
2/20/2013	8:17:00	14.812	14.504	0.308	0.711	4.32	-0.351	4.21	
2/20/2013	8:32:00	14.809	14.527	0.282	0.651	4.32	-0.291	3.49	
2/20/2013	8:47:00	14.804	14.510	0.294	0.678	4.32	-0.318	3.82	
2/20/2013	9:02:00	14.805	14.509	0.296	0.683	4.32	-0.323	3.87	
2/20/2013	9:17:00	14.809	14.511	0.298	0.687	4.32	-0.327	3.93	
2/20/2013	9:32:00	14.812	14.511	0.301	0.694	4.32	-0.334	4.01	
2/20/2013	9:47:00	14.805	14.518	0.287	0.662	4.32	-0.302	3.63	
2/20/2013	10:02:00	14.815	14.513	0.302	0.697	4.32	-0.337	4.04	
2/20/2013	10:17:00	14.802	14.515	0.287	0.662	4.32	-0.302	3.63	
2/20/2013	10:32:00	14.829	14.517	0.312	0.720	4.32	-0.360	4.32	
2/20/2013	10:47:00	14.814	14.521	0.293	0.676	4.32	-0.316	3.79	
2/20/2013	11:02:00	14.822	14.516	0.306	0.706	4.32	-0.346	4.15	
2/20/2013	11:17:00	14.811	14.511	0.300	0.692	4.32	-0.332	3.99	
2/20/2013	11:32:00	14.809	14.509	0.300	0.692	4.32	-0.332	3.99	
2/20/2013	11:47:00	14.805	14.506	0.299	0.690	4.32	-0.330	3.96	
2/20/2013	12:02:00	14.804	14.503	0.301	0.694	4.32	-0.334	4.01	
2/20/2013	12:17:00	14.803	14.497	0.306	0.706	4.32	-0.346	4.15	
2/20/2013	12:32:00	14.794	14.492	0.302	0.697	4.32	-0.337	4.04	
2/20/2013	12:47:00	14.785	14.493	0.292	0.674	4.32	-0.314	3.76	
2/20/2013	13:02:00	14.793	14.487	0.306	0.706	4.32	-0.346	4.15	
2/20/2013	13:17:00	14.785	14.486	0.299	0.690	4.32	-0.330	3.96	
2/20/2013	13:32:00	14.782	14.486	0.296	0.683	4.32	-0.323	3.87	
2/20/2013	13:47:00	14.785	14.484	0.301	0.694	4.32	-0.334	4.01	
2/20/2013	14:02:00	14.781	14.484	0.297	0.685	4.32	-0.325	3.90	
2/20/2013	14:17:00	14.778	14.479	0.299	0.690	4.32	-0.330	3.96	
2/20/2013	14:32:00	14.775	14.475	0.300	0.692	4.32	-0.332	3.99	

2/20/2013	14:47:00	14.769	14.477	0.292	0.674	4.32	-0.314	3.76
2/20/2013	15:02:00	14.769	14.470	0.299	0.690	4.32	-0.330	3.96
2/20/2013	15:17:00	14.768	14.476	0.292	0.674	4.32	-0.314	3.76
2/20/2013	15:32:00	14.771	14.475	0.296	0.683	4.32	-0.323	3.87
2/20/2013	15:47:00	14.762	14.480	0.282	0.651	4.32	-0.291	3.49
2/20/2013	16:02:00	14.770	14.478	0.292	0.674	4.32	-0.314	3.76
2/20/2013	16:17:00	14.769	14.481	0.288	0.664	4.32	-0.304	3.65
2/20/2013	16:32:00	14.772	14.481	0.291	0.671	4.32	-0.311	3.74
2/20/2013	16:47:00	14.779	14.472	0.307	0.708	4.32	-0.348	4.18
2/20/2013	17:02:00	14.771	14.477	0.294	0.678	4.32	-0.318	3.82
2/20/2013	17:17:00	14.768	14.476	0.292	0.674	4.32	-0.314	3.76
2/20/2013	17:32:00	14.776	14.478	0.298	0.687	4.32	-0.327	3.93
2/20/2013	17:47:00	14.775	14.481	0.294	0.678	4.32	-0.318	3.82
2/20/2013	18:02:00	14.774	14.485	0.289	0.667	4.32	-0.307	3.68
2/20/2013	18:17:00	14.781	14.480	0.301	0.694	4.32	-0.334	4.01
2/20/2013	18:32:00	14.788	14.494	0.294	0.678	4.32	-0.318	3.82
2/20/2013	18:47:00	14.795	14.500	0.295	0.681	4.32	-0.321	3.85
2/20/2013	19:02:00	14.794	14.496	0.298	0.687	4.32	-0.327	3.93
2/20/2013	19:17:00	14.793	14.497	0.296	0.683	4.32	-0.323	3.87
2/20/2013	19:32:00	14.788	14.491	0.297	0.685	4.32	-0.325	3.90
2/20/2013	19:47:00	14.782	14.479	0.303	0.699	4.32	-0.339	4.07
2/20/2013	20:02:00	14.789	14.492	0.297	0.685	4.32	-0.325	3.90
2/20/2013	20:17:00	14.791	14.496	0.295	0.681	4.32	-0.321	3.85
2/20/2013	20:32:00	14.784	14.503	0.281	0.648	4.32	-0.288	3.46
2/20/2013	20:47:00	14.795	14.499	0.296	0.683	4.32	-0.323	3.87
2/20/2013	21:02:00	14.799	14.497	0.302	0.697	4.32	-0.337	4.04
2/20/2013	21:17:00	14.788	14.495	0.293	0.676	4.32	-0.316	3.79
2/20/2013	21:32:00	14.786	14.502	0.284	0.655	4.32	-0.295	3.54
2/20/2013	21:47:00	14.785	14.503	0.282	0.651	4.32	-0.291	3.49
2/20/2013	22:02:00	14.787	14.505	0.282	0.651	4.32	-0.291	3.49
2/20/2013	22:17:00	14.792	14.508	0.284	0.655	4.32	-0.295	3.54
2/20/2013	22:32:00	14.797	14.508	0.289	0.667	4.32	-0.307	3.68
2/20/2013	22:47:00	14.793	14.512	0.281	0.648	4.32	-0.288	3.46
2/20/2013	23:02:00	14.799	14.507	0.292	0.674	4.32	-0.314	3.76
2/20/2013	23:17:00	14.792	14.508	0.284	0.655	4.32	-0.295	3.54
2/20/2013	23:32:00	14.793	14.506	0.287	0.662	4.32	-0.302	3.63
2/20/2013	23:47:00	14.797	14.506	0.291	0.671	4.32	-0.311	3.74
2/21/2013	0:02:00	14.793	14.509	0.284	0.655	4.32	-0.295	3.54
2/21/2013	0:17:00	14.801	14.518	0.283	0.653	4.32	-0.293	3.51
2/21/2013	0:32:00	14.805	14.520	0.285	0.657	4.32	-0.297	3.57
2/21/2013	0:47:00	14.819	14.515	0.304	0.701	4.32	-0.341	4.10
2/21/2013	1:02:00	14.798	14.522	0.276	0.637	4.32	-0.277	3.32
2/21/2013	1:17:00	14.818	14.527	0.291	0.671	4.32	-0.311	3.74
2/21/2013	1:32:00	14.810	14.526	0.284	0.655	4.32	-0.295	3.54
2/21/2013	1:47:00	14.814	14.521	0.293	0.676	4.32	-0.316	3.79
2/21/2013	2:02:00	14.806	14.524	0.282	0.651	4.32	-0.291	3.49
2/21/2013	2:17:00	14.804	14.524	0.280	0.646	4.32	-0.286	3.43
2/21/2013	2:32:00	14.804	14.526	0.278	0.641	4.32	-0.281	3.38
2/21/2013	2:47:00	14.806	14.525	0.281	0.648	4.32	-0.288	3.46
2/21/2013	3:02:00	14.810	14.530	0.280	0.646	4.32	-0.286	3.43
2/21/2013	3:17:00	14.809	14.532	0.277	0.639	4.32	-0.279	3.35
2/21/2013	3:32:00	14.815	14.532	0.283	0.653	4.32	-0.293	3.51
2/21/2013	3:47:00	14.812	14.533	0.279	0.644	4.32	-0.284	3.40
2/21/2013	4:02:00	14.809	14.531	0.278	0.641	4.32	-0.281	3.38
2/21/2013	4:17:00	14.813	14.532	0.281	0.648	4.32	-0.288	3.46
2/21/2013	4:32:00	14.815	14.532	0.283	0.653	4.32	-0.293	3.51
2/21/2013	4:47:00	14.808	14.537	0.271	0.625	4.32	-0.265	3.18
2/21/2013	5:02:00	14.814	14.533	0.281	0.648	4.32	-0.288	3.46
2/21/2013	5:17:00	14.820	14.546	0.274	0.632	4.32	-0.272	3.27
2/21/2013	5:32:00	14.819	14.534	0.285	0.657	4.32	-0.297	3.57
2/21/2013	5:47:00	14.818	14.540	0.278	0.641	4.32	-0.281	3.38
2/21/2013	6:02:00	14.824	14.549	0.275	0.634	4.32	-0.274	3.29
2/21/2013	6:17:00	14.824	14.547	0.277	0.639	4.32	-0.279	3.35
2/21/2013	6:32:00	14.828	14.549	0.279	0.644	4.32	-0.284	3.40
2/21/2013	6:47:00	14.824	14.554	0.270	0.623	4.32	-0.263	3.15
2/21/2013	7:02:00	14.835	14.553	0.282	0.651	4.32	-0.291	3.49
2/21/2013	7:17:00	14.837	14.551	0.286	0.660	4.32	-0.300	3.60
2/21/2013	7:32:00	14.831	14.553	0.278	0.641	4.32	-0.281	3.38
2/21/2013	7:47:00	14.838	14.555	0.283	0.653	4.32	-0.293	3.51
2/21/2013	8:02:00	14.840	14.555	0.285	0.657	4.32	-0.297	3.57
2/21/2013	8:17:00	14.841	14.560	0.281	0.648	4.32	-0.288	3.46
2/21/2013	8:32:00	14.846	14.570	0.276	0.637	4.32	-0.277	3.32
2/21/2013	8:47:00	14.854	14.567	0.287	0.662	4.32	-0.302	3.63
2/21/2013	9:02:00	14.851	14.570	0.281	0.648	4.32	-0.288	3.46
2/21/2013	9:17:00	14.851	14.567	0.284	0.655	4.32	-0.295	3.54
2/21/2013	9:32:00	14.846	14.562	0.284	0.655	4.32	-0.295	3.54
2/21/2013	9:47:00	14.848	14.555	0.293	0.676	4.32	-0.316	3.79
2/21/2013	10:02:00	14.851	14.564	0.287	0.662	4.32	-0.302	3.63
2/21/2013	10:17:00	14.853	14.560	0.293	0.676	4.32	-0.316	3.79
2/21/2013	10:32:00	14.860	14.563	0.297	0.685	4.32	-0.325	3.90
2/21/2013	10:47:00	14.851	14.565	0.286	0.660	4.32	-0.300	3.60
2/21/2013	11:02:00	14.842	14.558	0.284	0.655	4.32	-0.295	3.54
2/21/2013	11:17:00	14.841	14.564	0.277	0.639	4.32	-0.279	3.35
2/21/2013	11:32:00	14.846	14.554	0.292	0.674	4.32	-0.314	3.76
2/21/2013	11:47:00	14.840	14.553	0.287	0.662	4.32	-0.302	3.63
2/21/2013	12:02:00	14.831	14.551	0.280	0.646	4.32	-0.286	3.43
2/21/2013	12:17:00	14.828	14.544	0.284	0.655	4.32	-0.295	3.54
2/21/2013	12:32:00	14.823	14.543	0.280	0.646	4.32	-0.286	3.43
2/21/2013	12:47:00	14.819	14.539	0.280	0.646	4.32	-0.286	3.43
2/21/2013	13:02:00	14.814	14.530	0.284	0.655	4.32	-0.295	3.54
2/21/2013	13:17:00	14.806	14.527	0.279	0.644	4.32	-0.284	3.40
2/21/2013	13:32:00	14.815	14.523	0.292	0.674	4.32	-0.314	3.76
2/21/2013	13:47:00	14.798	14.516	0.282	0.651	4.32	-0.291	3.49
2/21/2013	14:02:00	14.798	14.517	0.281	0.648	4.32	-0.288	3.46
2/21/2013	14:17:00	14.786	14.509	0.277	0.639	4.32	-0.279	3.35
2/21/2013	14:32:00	14.782	14.499	0.283	0.653	4.32	-0.293	3.51
2/21/2013	14:47:00	14.782	14.505	0.277	0.639	4.32	-0.279	3.35
2/21/2013	15:02:00	14.788	14.508	0.280	0.646	4.32	-0.286	3.43
2/21/2013	15:17:00	14.788	14.510	0.278	0.641	4.32	-0.281	3.38
2/21/2013	15:32:00	14.787	14.515	0.272	0.628	4.32	-0.268	3.21
2/21/2013	15:47:00	14.788	14.519	0.269	0.621	4.32	-0.261	3.13
2/21/2013	16:02:00	14.793	14.523	0.270	0.623	4.32	-0.263	3.15
2/21/2013	16:17:00	14.795	14.516	0.279	0.644	4.32	-0.284	3.40
2/21/2013	16:32:00	14.792	14.517	0.275	0.634	4.32	-0.274	3.29
2/21/2013	16:47:00	14.785	14.509	0.276	0.637	4.32	-0.277	3.32
2/21/2013	17:02:00	14.788	14.510	0.278	0.641	4.32	-0.281	3.38
2/21/2013	17:17:00	14.791	14.508	0.283	0.653	4.32	-0.293	3.51
2/21/2013	17:32:00	14.787	14.514	0.273	0.630	4.32	-0.270	3.24
2/21/2013	17:47:00	14.792	14.514	0.278	0.641	4.32	-0.281	3.38
2/21/2013	18:02:00	14.791	14.513	0.278	0.641	4.32	-0.281	3.38
2/21/2013	18:17:00	14.799	14.525	0.274	0.632	4.32	-0.272	3.27
2/21/2013	18:32:00	14.797	14.517	0.280	0.646	4.32	-0.286	3.43
2/21/2013	18:47:00	14.800	14.526	0.274	0.632	4.32	-0.272	3.27
2/21/2013	19:02:00	14.800	14.521	0.279	0.644	4.32	-0.284	3.40
2/21/2013	19:17:00	14.804	14.527	0.277	0.639	4.32	-0.279	3.35
2/21/2013	19:32:00	14.805	14.526	0.279	0.644	4.32	-0.284	3.40
2/21/2013	19:47:00	14.803	14.526	0.277	0.639	4.32	-0.279	3.35
2/21/2013	20:02:00	14.806	14.522	0.284	0.655	4.32	-0.295	3.54
2/21/2013	20:17:00	14.802	14.526	0.276	0.637	4.32	-0.277	3.32
2/21/2013	20:32:00	14.796	14.526	0.270	0.623	4.32	-0.263	3.15
2/21/2013	20:47:00	14.796	14.524	0.272	0.628	4.32	-0.268	3.21
2/21/2013	21:02:00	14.803	14.525	0.278	0.641	4.32	-0.281	3.38
2/21/2013	21:17:00	14.805	14.524	0.281	0.648	4.32	-0.288	3.46
2/21/2013	21:32:00	14.801	14.531	0.270	0.623	4.32	-0.263	3.15
2/21/2013	21:47:00	14.817	14.547	0.270	0.623	4.32	-0.263	3.15
2/21/2013	22:02:00	14.816	14.545	0.271	0.625	4.32	-0.265	3.18
2/21/2013	22:17:00	14.818	14.551	0.267	0.616	4.32	-0.256	3.07
2/21/2013	22:32:00	14.831	14.550	0.281	0.648	4.32	-0.288	3.46
2/21/2013	22:47:00	14.825	14.550	0.275	0.634	4.32	-0.274	3.29
2/21/2013	23:02:00	14.832	14.555	0.277	0.639	4.32	-0.279	3.35
2/21/2013	23:17:00	14.821	14.551	0.270	0.623	4.32	-0.263	3.15
2/21/2013	23:32:00	14.825	14.548	0.277	0.639	4.32	-0.279	3.35
2/21/2013	23:47:00	14.833	14.562	0.271	0.625	4.32	-0.265	3.18

2/22/2013	0:02:00	14.834	14.565	0.269	0.621	4.32	-0.261	3.13	
2/22/2013	0:17:00	14.858	14.578	0.280	0.646	4.32	-0.286	3.43	
2/22/2013	0:32:00	14.847	14.566	0.281	0.648	4.32	-0.288	3.46	
2/22/2013	0:47:00	14.841	14.562	0.279	0.644	4.32	-0.284	3.40	
2/22/2013	1:02:00	14.837	14.565	0.272	0.628	4.32	-0.268	3.21	
2/22/2013	1:17:00	14.832	14.566	0.266	0.614	4.32	-0.254	3.04	
2/22/2013	1:32:00	14.837	14.577	0.260	0.600	4.32	-0.240	2.88	
2/22/2013	1:47:00	14.844	14.572	0.272	0.628	4.32	-0.268	3.21	
2/22/2013	2:02:00	14.848	14.576	0.272	0.628	4.32	-0.268	3.21	
2/22/2013	2:17:00	14.847	14.586	0.261	0.602	4.32	-0.242	2.91	
2/22/2013	2:32:00	14.873	14.595	0.278	0.641	4.32	-0.281	3.38	
2/22/2013	2:47:00	14.868	14.597	0.271	0.625	4.32	-0.265	3.18	
2/22/2013	3:02:00	14.871	14.593	0.278	0.641	4.32	-0.281	3.38	
2/22/2013	3:17:00	14.857	14.581	0.276	0.637	4.32	-0.277	3.32	
2/22/2013	3:32:00	14.849	14.578	0.271	0.625	4.32	-0.265	3.18	
2/22/2013	3:47:00	14.847	14.570	0.277	0.639	4.32	-0.279	3.35	
2/22/2013	4:02:00	14.839	14.573	0.266	0.614	4.32	-0.254	3.04	
2/22/2013	4:17:00	14.836	14.569	0.267	0.616	4.32	-0.256	3.07	
2/22/2013	4:32:00	14.826	14.562	0.264	0.609	4.32	-0.249	2.99	
2/22/2013	4:47:00	14.834	14.561	0.273	0.630	4.32	-0.270	3.24	
2/22/2013	5:02:00	14.839	14.565	0.274	0.632	4.32	-0.272	3.27	
2/22/2013	5:17:00	14.831	14.569	0.262	0.604	4.32	-0.244	2.93	
2/22/2013	5:32:00	14.843	14.573	0.270	0.623	4.32	-0.263	3.15	
2/22/2013	5:47:00	14.840	14.583	0.257	0.593	4.32	-0.233	2.79	
2/22/2013	6:02:00	14.848	14.578	0.270	0.623	4.32	-0.263	3.15	
2/22/2013	6:17:00	14.848	14.582	0.266	0.614	4.32	-0.254	3.04	
2/22/2013	6:32:00	14.843	14.575	0.268	0.618	4.32	-0.258	3.10	
2/22/2013	6:47:00	14.846	14.571	0.275	0.634	4.32	-0.274	3.29	0.01
2/22/2013	7:02:00	14.844	14.571	0.273	0.630	4.32	-0.270	3.24	0.02
2/22/2013	7:17:00	14.846	14.568	0.278	0.641	4.32	-0.281	3.38	
2/22/2013	7:32:00	14.846	14.584	0.262	0.604	4.32	-0.244	2.93	0.03
2/22/2013	7:47:00	14.855	14.576	0.279	0.644	4.32	-0.284	3.40	
2/22/2013	8:02:00	14.856	14.576	0.280	0.646	4.32	-0.286	3.43	
2/22/2013	8:17:00	14.851	14.568	0.283	0.653	4.32	-0.293	3.51	
2/22/2013	8:32:00	14.856	14.598	0.258	0.595	4.32	-0.235	2.82	
2/22/2013	8:47:00	14.860	14.570	0.290	0.669	4.32	-0.309	3.71	
2/22/2013	9:02:00	14.853	14.565	0.288	0.664	4.32	-0.304	3.65	
2/22/2013	9:17:00	14.854	14.589	0.265	0.611	4.32	-0.251	3.02	
2/22/2013	9:32:00	14.855	14.571	0.284	0.655	4.32	-0.295	3.54	
2/22/2013	9:47:00	14.854	14.579	0.275	0.634	4.32	-0.274	3.29	0.04
2/22/2013	10:02:00	14.862	14.585	0.277	0.639	4.32	-0.279	3.35	
2/22/2013	10:17:00	14.861	14.575	0.286	0.660	4.32	-0.300	3.60	
2/22/2013	10:32:00	14.857	14.583	0.274	0.632	4.32	-0.272	3.27	
2/22/2013	10:47:00	14.851	14.581	0.270	0.623	4.32	-0.263	3.15	
2/22/2013	11:02:00	14.854	14.581	0.273	0.630	4.32	-0.270	3.24	
2/22/2013	11:17:00	14.854	14.578	0.276	0.637	4.32	-0.277	3.32	
2/22/2013	11:32:00	14.847	14.580	0.267	0.616	4.32	-0.256	3.07	
2/22/2013	11:47:00	14.849	14.580	0.269	0.621	4.32	-0.261	3.13	
2/22/2013	12:02:00	14.850	14.562	0.288	0.664	4.32	-0.304	3.65	
2/22/2013	12:17:00	14.846	14.586	0.260	0.600	4.32	-0.240	2.88	
2/22/2013	12:32:00	14.844	14.565	0.279	0.644	4.32	-0.284	3.40	
2/22/2013	12:47:00	14.837	14.559	0.278	0.641	4.32	-0.281	3.38	
2/22/2013	13:02:00	14.839	14.561	0.278	0.641	4.32	-0.281	3.38	0.05
2/22/2013	13:17:00	14.829	14.553	0.276	0.637	4.32	-0.277	3.32	0.06
2/22/2013	13:32:00	14.827	14.551	0.276	0.637	4.32	-0.277	3.32	
2/22/2013	13:47:00	14.823	14.546	0.277	0.639	4.32	-0.279	3.35	
2/22/2013	14:02:00	14.825	14.549	0.276	0.637	4.32	-0.277	3.32	
2/22/2013	14:17:00	14.824	14.546	0.278	0.641	4.32	-0.281	3.38	0.07
2/22/2013	14:32:00	14.823	14.546	0.277	0.639	4.32	-0.279	3.35	
2/22/2013	14:47:00	14.831	14.539	0.292	0.674	4.32	-0.314	3.76	
2/22/2013	15:02:00	14.827	14.550	0.277	0.639	4.32	-0.279	3.35	
2/22/2013	15:17:00	14.827	14.548	0.279	0.644	4.32	-0.284	3.40	
2/22/2013	15:32:00	14.831	14.544	0.287	0.662	4.32	-0.302	3.63	
2/22/2013	15:47:00	14.831	14.548	0.283	0.653	4.32	-0.293	3.51	0.08
2/22/2013	16:02:00	14.834	14.546	0.288	0.664	4.32	-0.304	3.65	
2/22/2013	16:17:00	14.835	14.549	0.286	0.660	4.32	-0.300	3.60	
2/22/2013	16:32:00	14.831	14.547	0.284	0.655	4.32	-0.295	3.54	0.09
2/22/2013	16:47:00	14.834	14.543	0.291	0.671	4.32	-0.311	3.74	0.10
2/22/2013	17:02:00	14.836	14.535	0.301	0.694	4.32	-0.334	4.01	
2/22/2013	17:17:00	14.834	14.542	0.292	0.674	4.32	-0.314	3.76	0.11
2/22/2013	17:32:00	14.838	14.541	0.297	0.685	4.32	-0.325	3.90	
2/22/2013	17:47:00	14.842	14.539	0.303	0.699	4.32	-0.339	4.07	
2/22/2013	18:02:00	14.840	14.537	0.303	0.699	4.32	-0.339	4.07	0.12
2/22/2013	18:17:00	14.835	14.538	0.297	0.685	4.32	-0.325	3.90	
2/22/2013	18:32:00	14.837	14.530	0.307	0.708	4.32	-0.348	4.18	
2/22/2013	18:47:00	14.834	14.530	0.304	0.701	4.32	-0.341	4.10	0.13
2/22/2013	19:02:00	14.835	14.529	0.306	0.706	4.32	-0.346	4.15	0.14
2/22/2013	19:17:00	14.836	14.527	0.309	0.713	4.32	-0.353	4.23	
2/22/2013	19:32:00	14.838	14.535	0.303	0.699	4.32	-0.339	4.07	
2/22/2013	19:47:00	14.837	14.531	0.306	0.706	4.32	-0.346	4.15	
2/22/2013	20:02:00	14.841	14.536	0.305	0.704	4.32	-0.344	4.12	
2/22/2013	20:17:00	14.838	14.535	0.303	0.699	4.32	-0.339	4.07	
2/22/2013	20:32:00	14.845	14.535	0.310	0.715	4.32	-0.355	4.26	0.15
2/22/2013	20:47:00	14.849	14.538	0.311	0.717	4.32	-0.357	4.29	
2/22/2013	21:02:00	14.843	14.532	0.311	0.717	4.32	-0.357	4.29	
2/22/2013	21:17:00	14.849	14.534	0.315	0.727	4.32	-0.367	4.40	
2/22/2013	21:32:00	14.843	14.538	0.305	0.704	4.32	-0.344	4.12	
2/22/2013	21:47:00	14.855	14.531	0.324	0.747	4.32	-0.387	4.65	
2/22/2013	22:02:00	14.854	14.536	0.318	0.734	4.32	-0.374	4.48	
2/22/2013	22:17:00	14.850	14.535	0.315	0.727	4.32	-0.367	4.40	
2/22/2013	22:32:00	14.831	14.539	0.292	0.674	4.32	-0.314	3.76	
2/22/2013	22:47:00	14.852	14.530	0.322	0.743	4.32	-0.383	4.59	
2/22/2013	23:02:00	14.842	14.520	0.322	0.743	4.32	-0.383	4.59	
2/22/2013	23:17:00	14.818	14.513	0.305	0.704	4.32	-0.344	4.12	
2/22/2013	23:32:00	14.803	14.505	0.298	0.687	4.32	-0.327	3.93	
2/22/2013	23:47:00	14.822	14.507	0.315	0.727	4.32	-0.367	4.40	0.16
2/23/2013	0:02:00	14.798	14.508	0.290	0.669	4.32	-0.309	3.71	
2/23/2013	0:17:00	14.831	14.509	0.322	0.743	4.32	-0.383	4.59	
2/23/2013	0:32:00	14.830	14.509	0.321	0.741	4.32	-0.381	4.57	
2/23/2013	0:47:00	14.810	14.510	0.300	0.692	4.32	-0.332	3.99	
2/23/2013	1:02:00	14.831	14.505	0.326	0.752	4.32	-0.392	4.70	
2/23/2013	1:17:00	14.808	14.504	0.304	0.701	4.32	-0.341	4.10	
2/23/2013	1:32:00	14.820	14.497	0.323	0.745	4.32	-0.385	4.62	
2/23/2013	1:47:00	14.814	14.491	0.323	0.745	4.32	-0.385	4.62	
2/23/2013	2:02:00	14.811	14.488	0.323	0.745	4.32	-0.385	4.62	
2/23/2013	2:17:00	14.800	14.484	0.316	0.729	4.32	-0.369	4.43	
2/23/2013	2:32:00	14.797	14.480	0.317	0.731	4.32	-0.371	4.46	
2/23/2013	2:47:00	14.790	14.479	0.311	0.717	4.32	-0.357	4.29	
2/23/2013	3:02:00	14.783	14.467	0.316	0.729	4.32	-0.369	4.43	
2/23/2013	3:17:00	14.775	14.462	0.313	0.722	4.32	-0.362	4.35	0.03
2/23/2013	3:32:00	14.808	14.465	0.343	0.791	4.32	-0.431	5.18	0.06
2/23/2013	3:47:00	14.852	14.464	0.388	0.895	4.32	-0.535	6.42	0.09
2/23/2013	4:02:00	14.876	14.472	0.404	0.932	4.32	-0.572	6.86	0.10
2/23/2013	4:17:00	14.894	14.467	0.427	0.985	4.32	-0.625	7.50	
2/23/2013	4:32:00	14.897	14.468	0.429	0.990	4.32	-0.630	7.56	
2/23/2013	4:47:00	14.894	14.463	0.431	0.994	4.32	-0.634	7.61	
2/23/2013	5:02:00	14.888	14.460	0.428	0.987	4.32	-0.627	7.53	0.11
2/23/2013	5:17:00	14.888	14.454	0.434	1.001	4.32	-0.641	7.69	0.12
2/23/2013	5:32:00	14.901	14.453	0.448	1.034	4.32	-0.674	8.08	0.13
2/23/2013	5:47:00	14.923	14.451	0.472	1.089	4.32	-0.729	8.75	0.14
2/23/2013	6:02:00	14.922	14.452	0.470	1.084	4.32	-0.724	8.69	0.15
2/23/2013	6:17:00	14.937	14.456	0.481	1.110	4.32	-0.750	9.00	0.16
2/23/2013	6:32:00	14.932	14.448	0.484	1.117	4.32	-0.757	9.08	0.17
2/23/2013	6:47:00	14.938	14.441	0.497	1.147	4.32	-0.787	9.44	0.18
2/23/2013	7:02:00	14.950	14.441	0.509	1.174	4.32	-0.814	9.77	0.19
2/23/2013	7:17:00	14.965	14.449	0.516	1.190	4.32	-0.830	9.96	0.20
2/23/2013	7:32:00	14.983	14.457	0.526	1.213	4.32	-0.853	10.24	0.22
2/23/2013	7:47:00	14.999	14.447	0.552	1.273	4.32	-0.913	10.96	0.23
2/23/2013	8:02:00	15.030	14.451	0.579	1.336	4.32	-0.976	11.71	0.24
2/23/2013	8:17:00	15.048	14.431	0.617	1.423	4.32	-1.063	12.76	0.26
2/23/2013	8:32:00	15.085	14.437	0.648	1.495	4.32	-1.135	13.62	0.28
2/23/2013	8:47:00	15.108	14.437	0.671	1.548	4.32	-1.188	14.26	0.30
2/23/2013	9:02:00	15.095	14.453	0.642	1.481	4.32	-1.121	13.45	0.32

2/23/2013	9:17:00	15.072	14.434	0.638	1.472	4.32	-1.112	13.34	0.34
2/23/2013	9:32:00	15.052	14.446	0.606	1.398	4.32	-1.038	12.46	0.36
2/23/2013	9:47:00	15.042	14.450	0.592	1.366	4.32	-1.006	12.07	
2/23/2013	10:02:00	15.017	14.443	0.574	1.324	4.32	-0.964	11.57	
2/23/2013	10:17:00	14.999	14.440	0.559	1.290	4.32	-0.930	11.16	
2/23/2013	10:32:00	14.988	14.442	0.546	1.260	4.32	-0.900	10.80	
2/23/2013	10:47:00	14.986	14.440	0.546	1.260	4.32	-0.900	10.80	
2/23/2013	11:02:00	14.979	14.441	0.538	1.241	4.32	-0.881	10.57	
2/23/2013	11:17:00	14.974	14.436	0.538	1.241	4.32	-0.881	10.57	
2/23/2013	11:32:00	14.971	14.436	0.535	1.234	4.32	-0.874	10.49	
2/23/2013	11:47:00	14.963	14.434	0.529	1.220	4.32	-0.860	10.32	
2/23/2013	12:02:00	14.962	14.436	0.526	1.213	4.32	-0.853	10.24	
2/23/2013	12:17:00	14.957	14.429	0.528	1.218	4.32	-0.858	10.30	
2/23/2013	12:32:00	14.953	14.437	0.516	1.190	4.32	-0.830	9.96	0.37
2/23/2013	12:47:00	14.952	14.426	0.526	1.213	4.32	-0.853	10.24	0.36
2/23/2013	13:02:00	14.949	14.430	0.519	1.197	4.32	-0.837	10.05	
2/23/2013	13:17:00	14.952	14.426	0.526	1.213	4.32	-0.853	10.24	0.38
2/23/2013	13:32:00	14.945	14.418	0.527	1.216	4.32	-0.856	10.27	
2/23/2013	13:47:00	14.939	14.418	0.521	1.202	4.32	-0.842	10.10	
2/23/2013	14:02:00	14.939	14.412	0.527	1.216	4.32	-0.856	10.27	
2/23/2013	14:17:00	14.929	14.411	0.518	1.195	4.32	-0.835	10.02	
2/23/2013	14:32:00	14.931	14.404	0.527	1.216	4.32	-0.856	10.27	
2/23/2013	14:47:00	14.920	14.398	0.522	1.204	4.32	-0.844	10.13	
2/23/2013	15:02:00	14.920	14.397	0.523	1.207	4.32	-0.847	10.16	
2/23/2013	15:17:00	14.915	14.398	0.517	1.193	4.32	-0.833	9.99	
2/23/2013	15:32:00	14.920	14.404	0.516	1.190	4.32	-0.830	9.96	
2/23/2013	15:47:00	14.910	14.405	0.505	1.165	4.32	-0.805	9.66	
2/23/2013	16:02:00	14.922	14.396	0.526	1.213	4.32	-0.853	10.24	
2/23/2013	16:17:00	14.909	14.398	0.511	1.179	4.32	-0.819	9.83	
2/23/2013	16:32:00	14.909	14.401	0.508	1.172	4.32	-0.812	9.74	
2/23/2013	16:47:00	14.913	14.400	0.513	1.183	4.32	-0.823	9.88	
2/23/2013	17:02:00	14.902	14.387	0.515	1.188	4.32	-0.828	9.94	
2/23/2013	17:17:00	14.910	14.390	0.520	1.200	4.32	-0.840	10.08	
2/23/2013	17:32:00	14.892	14.387	0.505	1.165	4.32	-0.805	9.66	
2/23/2013	17:47:00	14.889	14.390	0.499	1.151	4.32	-0.791	9.49	
2/23/2013	18:02:00	14.890	14.393	0.497	1.147	4.32	-0.787	9.44	
2/23/2013	18:17:00	14.890	14.390	0.500	1.154	4.32	-0.794	9.52	
2/23/2013	18:32:00	14.881	14.389	0.492	1.135	4.32	-0.775	9.30	
2/23/2013	18:47:00	14.890	14.393	0.497	1.147	4.32	-0.787	9.44	
2/23/2013	19:02:00	14.885	14.391	0.494	1.140	4.32	-0.780	9.36	
2/23/2013	19:17:00	14.894	14.398	0.496	1.144	4.32	-0.784	9.41	
2/23/2013	19:32:00	14.889	14.402	0.487	1.124	4.32	-0.764	9.16	
2/23/2013	19:47:00	14.882	14.397	0.485	1.119	4.32	-0.759	9.11	
2/23/2013	20:02:00	14.886	14.396	0.490	1.130	4.32	-0.770	9.25	
2/23/2013	20:17:00	14.887	14.393	0.494	1.140	4.32	-0.780	9.36	
2/23/2013	20:32:00	14.881	14.402	0.479	1.105	4.32	-0.745	8.94	
2/23/2013	20:47:00	14.879	14.401	0.478	1.103	4.32	-0.743	8.91	
2/23/2013	21:02:00	14.876	14.391	0.485	1.119	4.32	-0.759	9.11	
2/23/2013	21:17:00	14.876	14.393	0.483	1.114	4.32	-0.754	9.05	
2/23/2013	21:32:00	14.870	14.387	0.483	1.114	4.32	-0.754	9.05	
2/23/2013	21:47:00	14.861	14.385	0.476	1.098	4.32	-0.738	8.86	
2/23/2013	22:02:00	14.848	14.376	0.472	1.089	4.32	-0.729	8.75	
2/23/2013	22:17:00	14.850	14.384	0.466	1.075	4.32	-0.715	8.58	
2/23/2013	22:32:00	14.850	14.389	0.461	1.064	4.32	-0.704	8.44	
2/23/2013	22:47:00	14.850	14.394	0.456	1.052	4.32	-0.692	8.30	
2/23/2013	23:02:00	14.851	14.385	0.466	1.075	4.32	-0.715	8.58	
2/23/2013	23:17:00	14.848	14.390	0.458	1.057	4.32	-0.697	8.36	
2/23/2013	23:32:00	14.845	14.389	0.456	1.052	4.32	-0.692	8.30	
2/23/2013	23:47:00	14.839	14.386	0.453	1.045	4.32	-0.685	8.22	
2/24/2013	0:02:00	14.836	14.385	0.451	1.040	4.32	-0.680	8.17	
2/24/2013	0:17:00	14.829	14.385	0.444	1.024	4.32	-0.664	7.97	
2/24/2013	0:32:00	14.831	14.382	0.449	1.036	4.32	-0.676	8.11	
2/24/2013	0:47:00	14.829	14.386	0.443	1.022	4.32	-0.662	7.94	
2/24/2013	1:02:00	14.828	14.388	0.440	1.015	4.32	-0.655	7.86	
2/24/2013	1:17:00	14.824	14.387	0.437	1.008	4.32	-0.648	7.78	
2/24/2013	1:32:00	14.824	14.392	0.432	0.997	4.32	-0.637	7.64	
2/24/2013	1:47:00	14.835	14.387	0.448	1.034	4.32	-0.674	8.08	
2/24/2013	2:02:00	14.830	14.387	0.443	1.022	4.32	-0.662	7.94	
2/24/2013	2:17:00	14.830	14.383	0.447	1.031	4.32	-0.671	8.05	
2/24/2013	2:32:00	14.827	14.382	0.445	1.027	4.32	-0.667	8.00	
2/24/2013	2:47:00	14.822	14.383	0.439	1.013	4.32	-0.653	7.83	
2/24/2013	3:02:00	14.815	14.379	0.436	1.006	4.32	-0.646	7.75	
2/24/2013	3:17:00	14.811	14.381	0.430	0.992	4.32	-0.632	7.58	
2/24/2013	3:32:00	14.803	14.376	0.427	0.985	4.32	-0.625	7.50	
2/24/2013	3:47:00	14.805	14.377	0.428	0.987	4.32	-0.627	7.53	
2/24/2013	4:02:00	14.803	14.379	0.424	0.978	4.32	-0.618	7.42	
2/24/2013	4:17:00	14.802	14.376	0.426	0.983	4.32	-0.623	7.47	
2/24/2013	4:32:00	14.805	14.380	0.425	0.980	4.32	-0.620	7.45	
2/24/2013	4:47:00	14.808	14.388	0.420	0.969	4.32	-0.609	7.31	
2/24/2013	5:02:00	14.814	14.391	0.423	0.976	4.32	-0.616	7.39	
2/24/2013	5:17:00	14.816	14.394	0.422	0.974	4.32	-0.614	7.36	
2/24/2013	5:32:00	14.814	14.394	0.420	0.969	4.32	-0.609	7.31	
2/24/2013	5:47:00	14.814	14.395	0.419	0.967	4.32	-0.607	7.28	
2/24/2013	6:02:00	14.815	14.397	0.418	0.964	4.32	-0.604	7.25	
2/24/2013	6:17:00	14.816	14.400	0.416	0.960	4.32	-0.600	7.20	
2/24/2013	6:32:00	14.822	14.405	0.417	0.962	4.32	-0.602	7.22	
2/24/2013	6:47:00	14.826	14.405	0.421	0.971	4.32	-0.611	7.33	
2/24/2013	7:02:00	14.829	14.413	0.416	0.960	4.32	-0.600	7.20	
2/24/2013	7:17:00	14.828	14.420	0.408	0.941	4.32	-0.581	6.98	
2/24/2013	7:32:00	14.834	14.420	0.414	0.955	4.32	-0.595	7.14	
2/24/2013	7:47:00	14.837	14.427	0.410	0.946	4.32	-0.586	7.03	
2/24/2013	8:02:00	14.840	14.431	0.409	0.944	4.32	-0.584	7.00	
2/24/2013	8:17:00	14.840	14.434	0.406	0.937	4.32	-0.577	6.92	
2/24/2013	8:32:00	14.844	14.437	0.407	0.939	4.32	-0.579	6.95	
2/24/2013	8:47:00	14.849	14.442	0.407	0.939	4.32	-0.579	6.95	
2/24/2013	9:02:00	14.846	14.436	0.410	0.946	4.32	-0.586	7.03	
2/24/2013	9:17:00	14.848	14.438	0.410	0.946	4.32	-0.586	7.03	
2/24/2013	9:32:00	14.851	14.445	0.406	0.937	4.32	-0.577	6.92	
2/24/2013	9:47:00	14.853	14.445	0.408	0.941	4.32	-0.581	6.98	
2/24/2013	10:02:00	14.853	14.444	0.409	0.944	4.32	-0.584	7.00	
2/24/2013	10:17:00	14.851	14.438	0.413	0.953	4.32	-0.593	7.11	
2/24/2013	10:32:00	14.849	14.442	0.407	0.939	4.32	-0.579	6.95	
2/24/2013	10:47:00	14.839	14.441	0.398	0.918	4.32	-0.558	6.70	
2/24/2013	11:02:00	14.847	14.437	0.410	0.946	4.32	-0.586	7.03	
2/24/2013	11:17:00	14.846	14.442	0.404	0.932	4.32	-0.572	6.86	
2/24/2013	11:32:00	14.845	14.441	0.404	0.932	4.32	-0.572	6.86	
2/24/2013	11:47:00	14.840	14.437	0.403	0.930	4.32	-0.570	6.84	
2/24/2013	12:02:00	14.836	14.436	0.400	0.923	4.32	-0.563	6.75	
2/24/2013	12:17:00	14.832	14.433	0.399	0.920	4.32	-0.560	6.73	
2/24/2013	12:32:00	14.830	14.432	0.398	0.918	4.32	-0.558	6.70	
2/24/2013	12:47:00	14.829	14.429	0.400	0.923	4.32	-0.563	6.75	
2/24/2013	13:02:00	14.823	14.430	0.393	0.907	4.32	-0.547	6.56	
2/24/2013	13:17:00	14.821	14.425	0.396	0.914	4.32	-0.554	6.64	
2/24/2013	13:32:00	14.817	14.424	0.393	0.907	4.32	-0.547	6.56	
2/24/2013	13:47:00	14.812	14.420	0.392	0.904	4.32	-0.544	6.53	
2/24/2013	14:02:00	14.809	14.415	0.394	0.909	4.32	-0.549	6.59	
2/24/2013	14:17:00	14.812	14.418	0.394	0.909	4.32	-0.549	6.59	
2/24/2013	14:32:00	14.801	14.422	0.379	0.874	4.32	-0.514	6.17	
2/24/2013	14:47:00	14.804	14.414	0.390	0.900	4.32	-0.540	6.48	
2/24/2013	15:02:00	14.806	14.412	0.394	0.909	4.32	-0.549	6.59	
2/24/2013	15:17:00	14.805	14.420	0.385	0.888	4.32	-0.528	6.34	
2/24/2013	15:32:00	14.803	14.411	0.392	0.904	4.32	-0.544	6.53	
2/24/2013	15:47:00	14.800	14.420	0.380	0.877	4.32	-0.517	6.20	
2/24/2013	16:02:00	14.795	14.418	0.377	0.870	4.32	-0.510	6.12	
2/24/2013	16:17:00	14.796	14.420	0.376	0.867	4.32	-0.507	6.09	
2/24/2013	16:32:00	14.800	14.411	0.389	0.897	4.32	-0.537	6.45	
2/24/2013	16:47:00	14.796	14.415	0.381	0.879	4.32	-0.519	6.23	
2/24/2013	17:02:00	14.798	14.421	0.377	0.870	4.32	-0.510	6.12	
2/24/2013	17:17:00	14.794	14.415	0.379	0.874	4.32	-0.514	6.17	
2/24/2013	17:32:00	14.797	14.418	0.379	0.874	4.32	-0.514	6.17	
2/24/2013	17:47:00	14.796	14.424	0.372	0.858	4.32	-0.498	5.98	
2/24/2013	18:02:00	14.799	14.421	0.378	0.872	4.32	-0.512	6.14	
2/24/2013	18:17:00	14.799	14.426	0.373	0.861	4.32	-0.501	6.01	

2/24/2013	18:32:00	14.804	14.426	0.378	0.872	4.32	-0.512	6.14
2/24/2013	18:47:00	14.807	14.432	0.375	0.865	4.32	-0.505	6.06
2/24/2013	19:02:00	14.809	14.440	0.369	0.851	4.32	-0.491	5.90
2/24/2013	19:17:00	14.809	14.442	0.367	0.847	4.32	-0.487	5.84
2/24/2013	19:32:00	14.811	14.441	0.370	0.854	4.32	-0.494	5.92
2/24/2013	19:47:00	14.814	14.439	0.375	0.865	4.32	-0.505	6.06
2/24/2013	20:02:00	14.815	14.437	0.378	0.872	4.32	-0.512	6.14
2/24/2013	20:17:00	14.808	14.451	0.357	0.824	4.32	-0.464	5.56
2/24/2013	20:32:00	14.810	14.452	0.358	0.826	4.32	-0.466	5.59
2/24/2013	20:47:00	14.806	14.448	0.358	0.826	4.32	-0.466	5.59
2/24/2013	21:02:00	14.810	14.450	0.360	0.831	4.32	-0.471	5.65
2/24/2013	21:17:00	14.814	14.450	0.364	0.840	4.32	-0.480	5.76
2/24/2013	21:32:00	14.810	14.451	0.359	0.828	4.32	-0.468	5.62
2/24/2013	21:47:00	14.815	14.456	0.359	0.828	4.32	-0.468	5.62
2/24/2013	22:02:00	14.818	14.461	0.357	0.824	4.32	-0.464	5.56
2/24/2013	22:17:00	14.816	14.463	0.353	0.814	4.32	-0.454	5.45
2/24/2013	22:32:00	14.822	14.466	0.356	0.821	4.32	-0.461	5.54
2/24/2013	22:47:00	14.822	14.466	0.356	0.821	4.32	-0.461	5.54
2/24/2013	23:02:00	14.821	14.464	0.357	0.824	4.32	-0.464	5.56
2/24/2013	23:17:00	14.815	14.471	0.344	0.794	4.32	-0.434	5.20
2/24/2013	23:32:00	14.815	14.468	0.347	0.801	4.32	-0.441	5.29
2/24/2013	23:47:00	14.816	14.463	0.353	0.814	4.32	-0.454	5.45
2/25/2013	0:02:00	14.818	14.469	0.349	0.805	4.32	-0.445	5.34
2/25/2013	0:17:00	14.813	14.471	0.342	0.789	4.32	-0.429	5.15
2/25/2013	0:32:00	14.815	14.467	0.348	0.803	4.32	-0.443	5.31
2/25/2013	0:47:00	14.814	14.465	0.349	0.805	4.32	-0.445	5.34
2/25/2013	1:02:00	14.811	14.466	0.345	0.796	4.32	-0.436	5.23
2/25/2013	1:17:00	14.808	14.464	0.344	0.794	4.32	-0.434	5.20
2/25/2013	1:32:00	14.809	14.470	0.339	0.782	4.32	-0.422	5.06
2/25/2013	1:47:00	14.814	14.474	0.340	0.784	4.32	-0.424	5.09
2/25/2013	2:02:00	14.813	14.474	0.339	0.782	4.32	-0.422	5.06
2/25/2013	2:17:00	14.811	14.471	0.340	0.784	4.32	-0.424	5.09
2/25/2013	2:32:00	14.809	14.467	0.342	0.789	4.32	-0.429	5.15
2/25/2013	2:47:00	14.810	14.469	0.341	0.787	4.32	-0.427	5.12
2/25/2013	3:02:00	14.808	14.466	0.342	0.789	4.32	-0.429	5.15
2/25/2013	3:17:00	14.810	14.470	0.340	0.784	4.32	-0.424	5.09
2/25/2013	3:32:00	14.808	14.473	0.335	0.773	4.32	-0.413	4.95
2/25/2013	3:47:00	14.815	14.473	0.342	0.789	4.32	-0.429	5.15
2/25/2013	4:02:00	14.813	14.471	0.342	0.789	4.32	-0.429	5.15
2/25/2013	4:17:00	14.805	14.472	0.333	0.768	4.32	-0.408	4.90
2/25/2013	4:32:00	14.807	14.479	0.328	0.757	4.32	-0.397	4.76
2/25/2013	4:47:00	14.813	14.482	0.331	0.764	4.32	-0.404	4.84
2/25/2013	5:02:00	14.805	14.482	0.323	0.745	4.32	-0.385	4.62
2/25/2013	5:17:00	14.812	14.486	0.326	0.752	4.32	-0.392	4.70
2/25/2013	5:32:00	14.825	14.484	0.341	0.787	4.32	-0.427	5.12
2/25/2013	5:47:00	14.821	14.490	0.331	0.764	4.32	-0.404	4.84
2/25/2013	6:02:00	14.823	14.493	0.330	0.761	4.32	-0.401	4.82
2/25/2013	6:17:00	14.832	14.496	0.336	0.775	4.32	-0.415	4.98
2/25/2013	6:32:00	14.815	14.497	0.318	0.734	4.32	-0.374	4.48
2/25/2013	6:47:00	14.836	14.502	0.334	0.771	4.32	-0.411	4.93
2/25/2013	7:02:00	14.824	14.501	0.323	0.745	4.32	-0.385	4.62
2/25/2013	7:17:00	14.836	14.512	0.324	0.747	4.32	-0.387	4.65
2/25/2013	7:32:00	14.849	14.513	0.336	0.775	4.32	-0.415	4.98
2/25/2013	7:47:00	14.846	14.521	0.325	0.750	4.32	-0.390	4.68
2/25/2013	8:02:00	14.840	14.527	0.313	0.722	4.32	-0.362	4.35
2/25/2013	8:17:00	14.866	14.525	0.341	0.787	4.32	-0.427	5.12
2/25/2013	8:32:00	14.848	14.530	0.318	0.734	4.32	-0.374	4.48
2/25/2013	8:47:00	14.855	14.538	0.317	0.731	4.32	-0.371	4.46
2/25/2013	9:02:00	14.876	14.533	0.343	0.791	4.32	-0.431	5.18
2/25/2013	9:17:00	14.868	14.543	0.325	0.750	4.32	-0.390	4.68
2/25/2013	9:32:00	14.862	14.538	0.324	0.747	4.32	-0.387	4.65
2/25/2013	9:47:00	14.861	14.548	0.313	0.722	4.32	-0.362	4.35
2/25/2013	10:02:00	14.869	14.545	0.324	0.747	4.32	-0.387	4.65
2/25/2013	10:17:00	14.860	14.539	0.321	0.741	4.32	-0.381	4.57
2/25/2013	10:32:00	14.865	14.540	0.325	0.750	4.32	-0.390	4.68
2/25/2013	10:47:00	14.864	14.538	0.326	0.752	4.32	-0.392	4.70
2/25/2013	11:02:00	14.863	14.535	0.328	0.757	4.32	-0.397	4.76
2/25/2013	11:17:00	14.862	14.535	0.327	0.754	4.32	-0.394	4.73
2/25/2013	11:32:00	14.858	14.529	0.329	0.759	4.32	-0.399	4.79
2/25/2013	11:47:00	14.852	14.534	0.318	0.734	4.32	-0.374	4.48
2/25/2013	12:02:00	14.852	14.531	0.321	0.741	4.32	-0.381	4.57
2/25/2013	12:17:00	14.847	14.525	0.322	0.743	4.32	-0.383	4.59
2/25/2013	12:32:00	14.850	14.530	0.320	0.738	4.32	-0.378	4.54
2/25/2013	12:47:00	14.844	14.524	0.320	0.738	4.32	-0.378	4.54
2/25/2013	13:02:00	14.840	14.522	0.318	0.734	4.32	-0.374	4.48
2/25/2013	13:17:00	14.837	14.516	0.321	0.741	4.32	-0.381	4.57
2/25/2013	13:32:00	14.836	14.516	0.320	0.738	4.32	-0.378	4.54
2/25/2013	13:47:00	14.832	14.510	0.322	0.743	4.32	-0.383	4.59
2/25/2013	14:02:00	14.827	14.515	0.312	0.720	4.32	-0.360	4.32
2/25/2013	14:17:00	14.831	14.507	0.324	0.747	4.32	-0.387	4.65
2/25/2013	14:32:00	14.834	14.511	0.323	0.745	4.32	-0.385	4.62
2/25/2013	14:47:00	14.827	14.507	0.320	0.738	4.32	-0.378	4.54
2/25/2013	15:02:00	14.821	14.505	0.316	0.729	4.32	-0.369	4.43
2/25/2013	15:17:00	14.822	14.505	0.317	0.731	4.32	-0.371	4.46
2/25/2013	15:32:00	14.823	14.503	0.320	0.738	4.32	-0.378	4.54
2/25/2013	15:47:00	14.812	14.497	0.315	0.727	4.32	-0.367	4.40
2/25/2013	16:02:00	14.814	14.498	0.316	0.729	4.32	-0.369	4.43
2/25/2013	16:17:00	14.820	14.499	0.321	0.741	4.32	-0.381	4.57
2/25/2013	16:32:00	14.823	14.499	0.324	0.747	4.32	-0.387	4.65
2/25/2013	16:47:00	14.810	14.505	0.305	0.704	4.32	-0.344	4.12
2/25/2013	17:02:00	14.812	14.506	0.306	0.706	4.32	-0.346	4.15
2/25/2013	17:17:00	14.810	14.490	0.320	0.738	4.32	-0.378	4.54
2/25/2013	17:32:00	14.817	14.514	0.303	0.699	4.32	-0.339	4.07
2/25/2013	17:47:00	14.817	14.514	0.303	0.699	4.32	-0.339	4.07
2/25/2013	18:02:00	14.819	14.508	0.311	0.717	4.32	-0.357	4.29
2/25/2013	18:17:00	14.821	14.502	0.319	0.736	4.32	-0.376	4.51
2/25/2013	18:32:00	14.822	14.508	0.314	0.724	4.32	-0.364	4.37
2/25/2013	18:47:00	14.823	14.513	0.310	0.715	4.32	-0.355	4.26
2/25/2013	19:02:00	14.823	14.505	0.318	0.734	4.32	-0.374	4.48
2/25/2013	19:17:00	14.819	14.505	0.314	0.724	4.32	-0.364	4.37
2/25/2013	19:32:00	14.817	14.508	0.309	0.713	4.32	-0.353	4.23
2/25/2013	19:47:00	14.819	14.507	0.312	0.720	4.32	-0.360	4.32
2/25/2013	20:02:00	14.821	14.511	0.310	0.715	4.32	-0.355	4.26
2/25/2013	20:17:00	14.820	14.506	0.314	0.724	4.32	-0.364	4.37
2/25/2013	20:32:00	14.820	14.511	0.309	0.713	4.32	-0.353	4.23
2/25/2013	20:47:00	14.813	14.508	0.305	0.704	4.32	-0.344	4.12
2/25/2013	21:02:00	14.817	14.506	0.311	0.717	4.32	-0.357	4.29
2/25/2013	21:17:00	14.818	14.511	0.307	0.708	4.32	-0.348	4.18
2/25/2013	21:32:00	14.809	14.514	0.295	0.681	4.32	-0.321	3.85
2/25/2013	21:47:00	14.821	14.511	0.310	0.715	4.32	-0.355	4.26
2/25/2013	22:02:00	14.806	14.504	0.302	0.697	4.32	-0.337	4.04
2/25/2013	22:17:00	14.817	14.498	0.319	0.736	4.32	-0.376	4.51
2/25/2013	22:32:00	14.795	14.490	0.305	0.704	4.32	-0.344	4.12
2/25/2013	22:47:00	14.805	14.490	0.315	0.727	4.32	-0.367	4.40
2/25/2013	23:02:00	14.789	14.494	0.295	0.681	4.32	-0.321	3.85
2/25/2013	23:17:00	14.790	14.490	0.300	0.692	4.32	-0.332	3.99
2/25/2013	23:32:00	14.783	14.487	0.296	0.683	4.32	-0.323	3.87
2/25/2013	23:47:00	14.795	14.487	0.308	0.711	4.32	-0.351	4.21
2/26/2013	0:02:00	14.798	14.485	0.313	0.722	4.32	-0.362	4.35
2/26/2013	0:17:00	14.803	14.484	0.319	0.736	4.32	-0.376	4.51
2/26/2013	0:32:00	14.776	14.482	0.294	0.678	4.32	-0.318	3.82
2/26/2013	0:47:00	14.767	14.481	0.286	0.660	4.32	-0.300	3.60
2/26/2013	1:02:00	14.766	14.471	0.295	0.681	4.32	-0.321	3.85
2/26/2013	1:17:00	14.783	14.478	0.305	0.704	4.32	-0.344	4.12
2/26/2013	1:32:00	14.776	14.473	0.303	0.699	4.32	-0.339	4.07
2/26/2013	1:47:00	14.771	14.477	0.294	0.678	4.32	-0.318	3.82
2/26/2013	2:02:00	14.764	14.472	0.292	0.674	4.32	-0.314	3.76
2/26/2013	2:17:00	14.755	14.468	0.287	0.662	4.32	-0.302	3.63
2/26/2013	2:32:00	14.749	14.459	0.290	0.669	4.32	-0.309	3.71
2/26/2013	2:47:00	14.768	14.456	0.312	0.720	4.32	-0.360	4.32
2/26/2013	3:02:00	14.741	14.450	0.291	0.671	4.32	-0.311	3.74
2/26/2013	3:17:00	14.753	14.439	0.314	0.724	4.32	-0.364	4.37
2/26/2013	3:32:00	14.731	14.438	0.293	0.676	4.32	-0.316	3.79

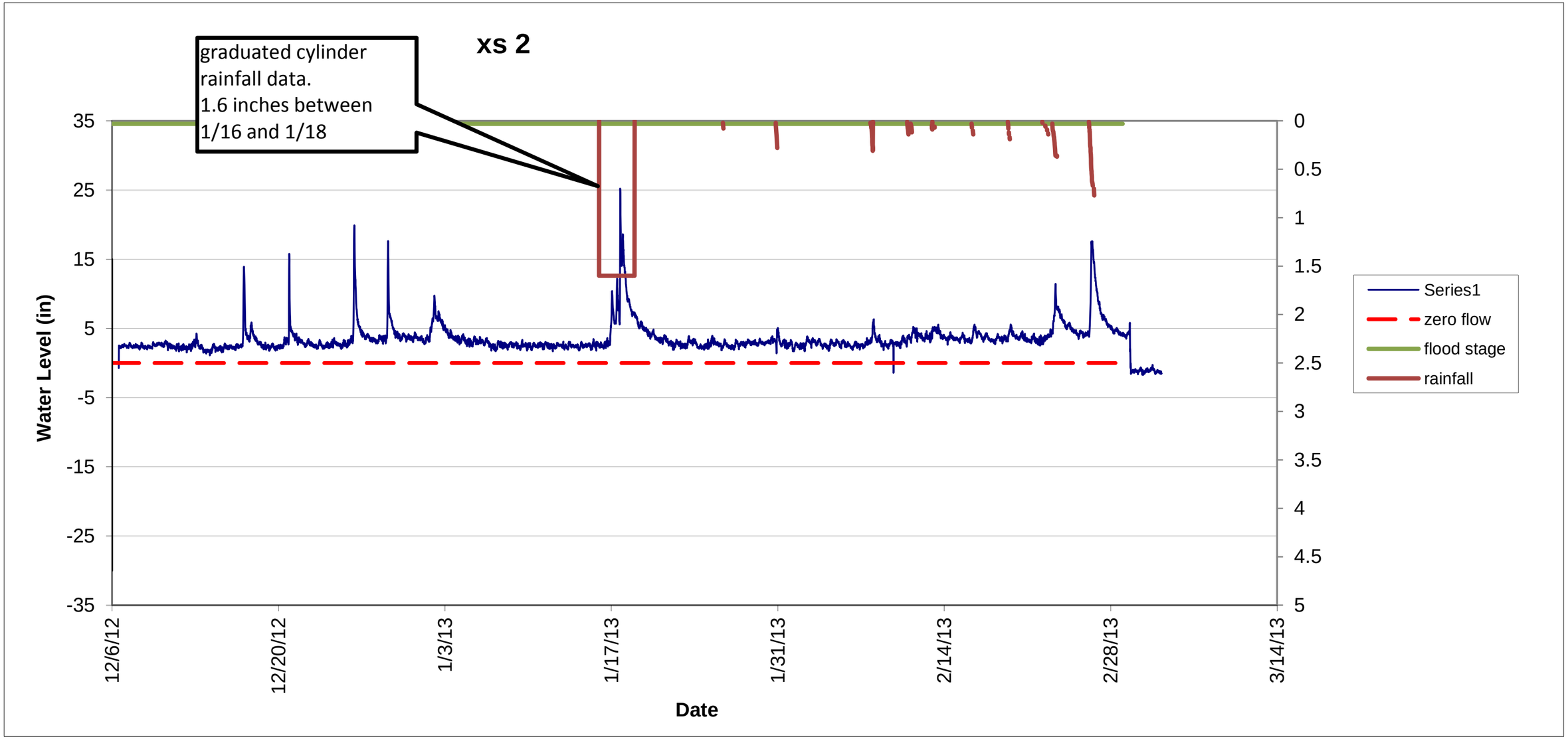
2/26/2013	3:47:00	14.724	14.435	0.289	0.667	4.32	-0.307	3.68	
2/26/2013	4:02:00	14.733	14.433	0.300	0.692	4.32	-0.332	3.99	
2/26/2013	4:17:00	14.743	14.427	0.316	0.729	4.32	-0.369	4.43	
2/26/2013	4:32:00	14.716	14.430	0.286	0.660	4.32	-0.300	3.60	
2/26/2013	4:47:00	14.711	14.423	0.288	0.664	4.32	-0.304	3.65	
2/26/2013	5:02:00	14.719	14.420	0.299	0.690	4.32	-0.330	3.96	0.01
2/26/2013	5:17:00	14.730	14.430	0.300	0.692	4.32	-0.332	3.99	0.03
2/26/2013	5:32:00	14.759	14.431	0.328	0.757	4.32	-0.397	4.76	0.04
2/26/2013	5:47:00	14.749	14.429	0.320	0.738	4.32	-0.378	4.54	0.07
2/26/2013	6:02:00	14.760	14.427	0.333	0.768	4.32	-0.408	4.90	
2/26/2013	6:17:00	14.785	14.421	0.364	0.840	4.32	-0.480	5.76	0.09
2/26/2013	6:32:00	14.807	14.410	0.397	0.916	4.32	-0.556	6.67	0.11
2/26/2013	6:47:00	14.846	14.405	0.441	1.017	4.32	-0.657	7.89	0.12
2/26/2013	7:02:00	14.873	14.401	0.472	1.089	4.32	-0.729	8.75	0.17
2/26/2013	7:17:00	14.930	14.395	0.535	1.234	4.32	-0.874	10.49	0.21
2/26/2013	7:32:00	14.955	14.398	0.557	1.285	4.32	-0.925	11.10	0.23
2/26/2013	7:47:00	14.972	14.402	0.570	1.315	4.32	-0.955	11.46	0.26
2/26/2013	8:02:00	14.971	14.398	0.573	1.322	4.32	-0.962	11.54	0.27
2/26/2013	8:17:00	15.013	14.389	0.624	1.440	4.32	-1.080	12.95	0.28
2/26/2013	8:32:00	15.062	14.383	0.679	1.566	4.32	-1.206	14.48	0.32
2/26/2013	8:47:00	15.137	14.376	0.761	1.756	4.32	-1.396	16.75	0.34
2/26/2013	9:02:00	15.215	14.377	0.838	1.933	4.32	-1.573	18.88	0.36
2/26/2013	9:17:00	15.223	14.371	0.852	1.966	4.32	-1.606	19.27	0.42
2/26/2013	9:32:00	15.211	14.363	0.848	1.956	4.32	-1.596	19.16	0.46
2/26/2013	9:47:00	15.182	14.358	0.824	1.901	4.32	-1.541	18.49	0.50
2/26/2013	10:02:00	15.152	14.356	0.796	1.836	4.32	-1.476	17.72	0.51
2/26/2013	10:17:00	15.166	14.358	0.808	1.864	4.32	-1.504	18.05	0.52
2/26/2013	10:32:00	15.166	14.348	0.818	1.887	4.32	-1.527	18.33	0.54
2/26/2013	10:47:00	15.166	14.344	0.822	1.896	4.32	-1.536	18.44	0.56
2/26/2013	11:02:00	15.165	14.338	0.827	1.908	4.32	-1.548	18.57	0.58
2/26/2013	11:17:00	15.151	14.324	0.827	1.908	4.32	-1.548	18.57	0.61
2/26/2013	11:32:00	15.128	14.329	0.799	1.843	4.32	-1.483	17.80	0.63
2/26/2013	11:47:00	15.113	14.307	0.806	1.859	4.32	-1.499	17.99	
2/26/2013	12:02:00	15.102	14.305	0.797	1.839	4.32	-1.479	17.74	
2/26/2013	12:17:00	15.084	14.301	0.783	1.806	4.32	-1.446	17.36	0.64
2/26/2013	12:32:00	15.076	14.294	0.782	1.804	4.32	-1.444	17.33	0.65
2/26/2013	12:47:00	15.061	14.282	0.779	1.797	4.32	-1.437	17.25	0.67
2/26/2013	13:02:00	15.051	14.274	0.777	1.793	4.32	-1.433	17.19	
2/26/2013	13:17:00	15.026	14.261	0.765	1.765	4.32	-1.405	16.86	
2/26/2013	13:32:00	15.014	14.257	0.757	1.746	4.32	-1.386	16.64	
2/26/2013	13:47:00	15.005	14.251	0.754	1.739	4.32	-1.379	16.55	
2/26/2013	14:02:00	14.994	14.258	0.736	1.698	4.32	-1.338	16.06	0.68
2/26/2013	14:17:00	14.994	14.260	0.734	1.693	4.32	-1.333	16.00	
2/26/2013	14:32:00	14.986	14.247	0.739	1.705	4.32	-1.345	16.14	
2/26/2013	14:47:00	14.986	14.246	0.740	1.707	4.32	-1.347	16.17	
2/26/2013	15:02:00	14.983	14.242	0.741	1.709	4.32	-1.349	16.19	
2/26/2013	15:17:00	14.965	14.237	0.728	1.679	4.32	-1.319	15.83	0.70
2/26/2013	15:32:00	14.957	14.236	0.721	1.663	4.32	-1.303	15.64	0.74
2/26/2013	15:47:00	14.957	14.237	0.720	1.661	4.32	-1.301	15.61	0.77
2/26/2013	16:02:00	14.952	14.241	0.711	1.640	4.32	-1.280	15.36	
2/26/2013	16:17:00	14.947	14.243	0.704	1.624	4.32	-1.264	15.17	
2/26/2013	16:32:00	14.941	14.241	0.700	1.615	4.32	-1.255	15.06	
2/26/2013	16:47:00	14.938	14.242	0.696	1.606	4.32	-1.246	14.95	
2/26/2013	17:02:00	14.937	14.250	0.687	1.585	4.32	-1.225	14.70	
2/26/2013	17:17:00	14.936	14.251	0.685	1.580	4.32	-1.220	14.64	
2/26/2013	17:32:00	14.933	14.258	0.675	1.557	4.32	-1.197	14.37	
2/26/2013	17:47:00	14.928	14.258	0.670	1.546	4.32	-1.186	14.23	
2/26/2013	18:02:00	14.927	14.257	0.670	1.546	4.32	-1.186	14.23	
2/26/2013	18:17:00	14.924	14.256	0.668	1.541	4.32	-1.181	14.17	
2/26/2013	18:32:00	14.920	14.267	0.653	1.506	4.32	-1.146	13.76	
2/26/2013	18:47:00	14.920	14.259	0.661	1.525	4.32	-1.165	13.98	
2/26/2013	19:02:00	14.913	14.268	0.645	1.488	4.32	-1.128	13.54	
2/26/2013	19:17:00	14.906	14.278	0.628	1.449	4.32	-1.089	13.07	
2/26/2013	19:32:00	14.920	14.277	0.643	1.483	4.32	-1.123	13.48	
2/26/2013	19:47:00	14.914	14.277	0.637	1.470	4.32	-1.110	13.31	
2/26/2013	20:02:00	14.910	14.280	0.630	1.453	4.32	-1.093	13.12	
2/26/2013	20:17:00	14.914	14.288	0.626	1.444	4.32	-1.084	13.01	
2/26/2013	20:32:00	14.903	14.291	0.612	1.412	4.32	-1.052	12.62	
2/26/2013	20:47:00	14.912	14.292	0.620	1.430	4.32	-1.070	12.84	
2/26/2013	21:02:00	14.909	14.296	0.613	1.414	4.32	-1.054	12.65	
2/26/2013	21:17:00	14.901	14.296	0.605	1.396	4.32	-1.036	12.43	
2/26/2013	21:32:00	14.901	14.295	0.606	1.398	4.32	-1.038	12.46	
2/26/2013	21:47:00	14.896	14.293	0.603	1.391	4.32	-1.031	12.37	
2/26/2013	22:02:00	14.894	14.295	0.599	1.382	4.32	-1.022	12.26	
2/26/2013	22:17:00	14.881	14.290	0.591	1.363	4.32	-1.003	12.04	
2/26/2013	22:32:00	14.871	14.297	0.574	1.324	4.32	-0.964	11.57	
2/26/2013	22:47:00	14.872	14.302	0.570	1.315	4.32	-0.955	11.46	
2/26/2013	23:02:00	14.869	14.299	0.570	1.315	4.32	-0.955	11.46	
2/26/2013	23:17:00	14.866	14.300	0.566	1.306	4.32	-0.946	11.35	
2/26/2013	23:32:00	14.867	14.301	0.566	1.306	4.32	-0.946	11.35	
2/26/2013	23:47:00	14.864	14.303	0.561	1.294	4.32	-0.934	11.21	
2/27/2013	0:02:00	14.865	14.301	0.564	1.301	4.32	-0.941	11.29	
2/27/2013	0:17:00	14.868	14.306	0.562	1.297	4.32	-0.937	11.24	
2/27/2013	0:32:00	14.867	14.305	0.562	1.297	4.32	-0.937	11.24	
2/27/2013	0:47:00	14.864	14.308	0.556	1.283	4.32	-0.923	11.07	
2/27/2013	1:02:00	14.865	14.307	0.558	1.287	4.32	-0.927	11.13	
2/27/2013	1:17:00	14.866	14.308	0.558	1.287	4.32	-0.927	11.13	
2/27/2013	1:32:00	14.859	14.309	0.550	1.269	4.32	-0.909	10.91	
2/27/2013	1:47:00	14.854	14.302	0.552	1.273	4.32	-0.913	10.96	
2/27/2013	2:02:00	14.838	14.308	0.530	1.223	4.32	-0.863	10.35	
2/27/2013	2:17:00	14.831	14.298	0.533	1.230	4.32	-0.870	10.44	
2/27/2013	2:32:00	14.831	14.298	0.533	1.230	4.32	-0.870	10.44	
2/27/2013	2:47:00	14.820	14.296	0.524	1.209	4.32	-0.849	10.19	
2/27/2013	3:02:00	14.825	14.298	0.527	1.216	4.32	-0.856	10.27	
2/27/2013	3:17:00	14.827	14.300	0.527	1.216	4.32	-0.856	10.27	
2/27/2013	3:32:00	14.829	14.302	0.527	1.216	4.32	-0.856	10.27	
2/27/2013	3:47:00	14.823	14.300	0.523	1.207	4.32	-0.847	10.16	
2/27/2013	4:02:00	14.828	14.303	0.525	1.211	4.32	-0.851	10.21	
2/27/2013	4:17:00	14.825	14.307	0.518	1.195	4.32	-0.835	10.02	
2/27/2013	4:32:00	14.830	14.312	0.518	1.195	4.32	-0.835	10.02	
2/27/2013	4:47:00	14.835	14.317	0.518	1.195	4.32	-0.835	10.02	
2/27/2013	5:02:00	14.841	14.319	0.522	1.204	4.32	-0.844	10.13	
2/27/2013	5:17:00	14.839	14.319	0.520	1.200	4.32	-0.840	10.08	
2/27/2013	5:32:00	14.837	14.325	0.512	1.181	4.32	-0.821	9.85	
2/27/2013	5:47:00	14.837	14.328	0.509	1.174	4.32	-0.814	9.77	
2/27/2013	6:02:00	14.839	14.328	0.511	1.179	4.32	-0.819	9.83	
2/27/2013	6:17:00	14.835	14.331	0.504	1.163	4.32	-0.803	9.63	
2/27/2013	6:32:00	14.840	14.335	0.505	1.165	4.32	-0.805	9.66	
2/27/2013	6:47:00	14.836	14.338	0.498	1.149	4.32	-0.789	9.47	
2/27/2013	7:02:00	14.828	14.345	0.483	1.114	4.32	-0.754	9.05	
2/27/2013	7:17:00	14.841	14.347	0.494	1.140	4.32	-0.780	9.36	
2/27/2013	7:32:00	14.843	14.344	0.499	1.151	4.32	-0.791	9.49	
2/27/2013	7:47:00	14.841	14.349	0.492	1.135	4.32	-0.775	9.30	
2/27/2013	8:02:00	14.850	14.355	0.495	1.142	4.32	-0.782	9.38	
2/27/2013	8:17:00	14.842	14.354	0.488	1.126	4.32	-0.766	9.19	
2/27/2013	8:32:00	14.846	14.360	0.486	1.121	4.32	-0.761	9.13	
2/27/2013	8:47:00	14.848	14.366	0.482	1.112	4.32	-0.752	9.02	
2/27/2013	9:02:00	14.846	14.367	0.479	1.105	4.32	-0.745	8.94	
2/27/2013	9:17:00	14.848	14.363	0.485	1.119	4.32	-0.759	9.11	
2/27/2013	9:32:00	14.851	14.373	0.478	1.103	4.32	-0.743	8.91	
2/27/2013	9:47:00	14.850	14.372	0.478	1.103	4.32	-0.743	8.91	
2/27/2013	10:02:00	14.842	14.369	0.473	1.091	4.32	-0.731	8.77	
2/27/2013	10:17:00	14.843	14.370	0.473	1.091	4.32	-0.731	8.77	
2/27/2013	10:32:00	14.840	14.363	0.477	1.100	4.32	-0.740	8.89	
2/27/2013	10:47:00	14.837	14.368	0.469	1.082	4.32	-0.722	8.66	
2/27/2013	11:02:00	14.824	14.370	0.454	1.047	4.32	-0.687	8.25	
2/27/2013	11:17:00	14.834	14.368	0.466	1.075	4.32	-0.715	8.58	
2/27/2013	11:32:00	14.831	14.369	0.462	1.066	4.32	-0.706	8.47	
2/27/2013	11:47:00	14.827	14.368	0.459	1.059	4.32	-0.699	8.39	
2/27/2013	12:02:00	14.818	14.362	0.456	1.052	4.32	-0.692	8.30	
2/27/2013	12:17:00	14.813	14.355	0.458	1.057	4.32	-0.697	8.36	
2/27/2013	12:32:00	14.807	14.361	0.446	1.029	4.32	-0.669	8.03	
2/27/2013	12:47:00	14.811	14.357	0.454	1.047	4.32	-0.687	8.25	

2/27/2013	13:02:00	14.810	14.358	0.452	1.043	4.32	-0.683	8.19
2/27/2013	13:17:00	14.801	14.352	0.449	1.036	4.32	-0.676	8.11
2/27/2013	13:32:00	14.797	14.352	0.445	1.027	4.32	-0.667	8.00
2/27/2013	13:47:00	14.795	14.350	0.445	1.027	4.32	-0.667	8.00
2/27/2013	14:02:00	14.793	14.351	0.442	1.020	4.32	-0.660	7.92
2/27/2013	14:17:00	14.791	14.346	0.445	1.027	4.32	-0.667	8.00
2/27/2013	14:32:00	14.786	14.351	0.435	1.004	4.32	-0.644	7.72
2/27/2013	14:47:00	14.783	14.351	0.432	0.997	4.32	-0.637	7.64
2/27/2013	15:02:00	14.775	14.341	0.434	1.001	4.32	-0.641	7.69
2/27/2013	15:17:00	14.770	14.341	0.429	0.990	4.32	-0.630	7.56
2/27/2013	15:32:00	14.768	14.336	0.432	0.997	4.32	-0.637	7.64
2/27/2013	15:47:00	14.766	14.332	0.434	1.001	4.32	-0.641	7.69
2/27/2013	16:02:00	14.763	14.336	0.427	0.985	4.32	-0.625	7.50
2/27/2013	16:17:00	14.758	14.334	0.424	0.978	4.32	-0.618	7.42
2/27/2013	16:32:00	14.754	14.338	0.416	0.960	4.32	-0.600	7.20
2/27/2013	16:47:00	14.753	14.335	0.418	0.964	4.32	-0.604	7.25
2/27/2013	17:02:00	14.752	14.337	0.415	0.957	4.32	-0.597	7.17
2/27/2013	17:17:00	14.755	14.332	0.423	0.976	4.32	-0.616	7.39
2/27/2013	17:32:00	14.750	14.334	0.416	0.960	4.32	-0.600	7.20
2/27/2013	17:47:00	14.749	14.334	0.415	0.957	4.32	-0.597	7.17
2/27/2013	18:02:00	14.747	14.335	0.412	0.950	4.32	-0.590	7.09
2/27/2013	18:17:00	14.747	14.331	0.416	0.960	4.32	-0.600	7.20
2/27/2013	18:32:00	14.750	14.336	0.414	0.955	4.32	-0.595	7.14
2/27/2013	18:47:00	14.746	14.339	0.407	0.939	4.32	-0.579	6.95
2/27/2013	19:02:00	14.756	14.337	0.419	0.967	4.32	-0.607	7.28
2/27/2013	19:17:00	14.748	14.335	0.413	0.953	4.32	-0.593	7.11
2/27/2013	19:32:00	14.743	14.349	0.394	0.909	4.32	-0.549	6.59
2/27/2013	19:47:00	14.742	14.339	0.403	0.930	4.32	-0.570	6.84
2/27/2013	20:02:00	14.741	14.339	0.402	0.927	4.32	-0.567	6.81
2/27/2013	20:17:00	14.741	14.334	0.407	0.939	4.32	-0.579	6.95
2/27/2013	20:32:00	14.741	14.335	0.406	0.937	4.32	-0.577	6.92
2/27/2013	20:47:00	14.738	14.335	0.403	0.930	4.32	-0.570	6.84
2/27/2013	21:02:00	14.738	14.335	0.403	0.930	4.32	-0.570	6.84
2/27/2013	21:17:00	14.739	14.335	0.404	0.932	4.32	-0.572	6.86
2/27/2013	21:32:00	14.736	14.337	0.399	0.920	4.32	-0.560	6.73
2/27/2013	21:47:00	14.735	14.327	0.408	0.941	4.32	-0.581	6.98
2/27/2013	22:02:00	14.737	14.334	0.403	0.930	4.32	-0.570	6.84
2/27/2013	22:17:00	14.729	14.331	0.398	0.918	4.32	-0.558	6.70
2/27/2013	22:32:00	14.730	14.335	0.395	0.911	4.32	-0.551	6.62
2/27/2013	22:47:00	14.726	14.335	0.391	0.902	4.32	-0.542	6.50
2/27/2013	23:02:00	14.727	14.333	0.394	0.909	4.32	-0.549	6.59
2/27/2013	23:17:00	14.730	14.335	0.395	0.911	4.32	-0.551	6.62
2/27/2013	23:32:00	14.723	14.329	0.394	0.909	4.32	-0.549	6.59
2/27/2013	23:47:00	14.720	14.332	0.388	0.895	4.32	-0.535	6.42
2/28/2013	0:02:00	14.718	14.329	0.389	0.897	4.32	-0.537	6.45
2/28/2013	0:17:00	14.724	14.330	0.394	0.909	4.32	-0.549	6.59
2/28/2013	0:32:00	14.722	14.335	0.387	0.893	4.32	-0.533	6.39
2/28/2013	0:47:00	14.716	14.329	0.387	0.893	4.32	-0.533	6.39
2/28/2013	1:02:00	14.711	14.332	0.379	0.874	4.32	-0.514	6.17
2/28/2013	1:17:00	14.708	14.328	0.380	0.877	4.32	-0.517	6.20
2/28/2013	1:32:00	14.716	14.338	0.378	0.872	4.32	-0.512	6.14
2/28/2013	1:47:00	14.711	14.335	0.376	0.867	4.32	-0.507	6.09
2/28/2013	2:02:00	14.711	14.329	0.382	0.881	4.32	-0.521	6.26
2/28/2013	2:17:00	14.708	14.333	0.375	0.865	4.32	-0.505	6.06
2/28/2013	2:32:00	14.703	14.325	0.378	0.872	4.32	-0.512	6.14
2/28/2013	2:47:00	14.702	14.329	0.373	0.861	4.32	-0.501	6.01
2/28/2013	3:02:00	14.702	14.323	0.379	0.874	4.32	-0.514	6.17
2/28/2013	3:17:00	14.699	14.325	0.374	0.863	4.32	-0.503	6.03
2/28/2013	3:32:00	14.698	14.328	0.370	0.854	4.32	-0.494	5.92
2/28/2013	3:47:00	14.703	14.327	0.376	0.867	4.32	-0.507	6.09
2/28/2013	4:02:00	14.700	14.333	0.367	0.847	4.32	-0.487	5.84
2/28/2013	4:17:00	14.695	14.331	0.364	0.840	4.32	-0.480	5.76
2/28/2013	4:32:00	14.692	14.332	0.360	0.831	4.32	-0.471	5.65
2/28/2013	4:47:00	14.714	14.337	0.377	0.870	4.32	-0.510	6.12
2/28/2013	5:02:00	14.691	14.335	0.356	0.821	4.32	-0.461	5.54
2/28/2013	5:17:00	14.703	14.338	0.365	0.842	4.32	-0.482	5.78
2/28/2013	5:32:00	14.710	14.332	0.378	0.872	4.32	-0.512	6.14
2/28/2013	5:47:00	14.678	14.334	0.344	0.794	4.32	-0.434	5.20
2/28/2013	6:02:00	14.712	14.341	0.371	0.856	4.32	-0.496	5.95
2/28/2013	6:17:00	14.710	14.342	0.368	0.849	4.32	-0.489	5.87
2/28/2013	6:32:00	14.706	14.349	0.357	0.824	4.32	-0.464	5.56
2/28/2013	6:47:00	14.702	14.344	0.358	0.826	4.32	-0.466	5.59
2/28/2013	7:02:00	14.699	14.350	0.349	0.805	4.32	-0.445	5.34
2/28/2013	7:17:00	14.698	14.344	0.354	0.817	4.32	-0.457	5.48
2/28/2013	7:32:00	14.700	14.346	0.354	0.817	4.32	-0.457	5.48
2/28/2013	7:47:00	14.710	14.353	0.357	0.824	4.32	-0.464	5.56
2/28/2013	8:02:00	14.716	14.353	0.363	0.837	4.32	-0.477	5.73
2/28/2013	8:17:00	14.710	14.354	0.356	0.821	4.32	-0.461	5.54
2/28/2013	8:32:00	14.708	14.359	0.349	0.805	4.32	-0.445	5.34
2/28/2013	8:47:00	14.702	14.359	0.343	0.791	4.32	-0.431	5.18
2/28/2013	9:02:00	14.727	14.354	0.373	0.861	4.32	-0.501	6.01
2/28/2013	9:17:00	14.707	14.360	0.347	0.801	4.32	-0.441	5.29
2/28/2013	9:32:00	14.719	14.361	0.358	0.826	4.32	-0.466	5.59
2/28/2013	9:47:00	14.710	14.357	0.353	0.814	4.32	-0.454	5.45
2/28/2013	10:02:00	14.711	14.360	0.351	0.810	4.32	-0.450	5.40
2/28/2013	10:17:00	14.713	14.360	0.353	0.814	4.32	-0.454	5.45
2/28/2013	10:32:00	14.709	14.359	0.350	0.807	4.32	-0.447	5.37
2/28/2013	10:47:00	14.715	14.358	0.357	0.824	4.32	-0.464	5.56
2/28/2013	11:02:00	14.714	14.357	0.357	0.824	4.32	-0.464	5.56
2/28/2013	11:17:00	14.715	14.357	0.358	0.826	4.32	-0.466	5.59
2/28/2013	11:32:00	14.717	14.355	0.362	0.835	4.32	-0.475	5.70
2/28/2013	11:47:00	14.711	14.362	0.349	0.805	4.32	-0.445	5.34
2/28/2013	12:02:00	14.716	14.360	0.356	0.821	4.32	-0.461	5.54
2/28/2013	12:17:00	14.721	14.361	0.360	0.831	4.32	-0.471	5.65
2/28/2013	12:32:00	14.707	14.356	0.351	0.810	4.32	-0.450	5.40
2/28/2013	12:47:00	14.705	14.358	0.347	0.801	4.32	-0.441	5.29
2/28/2013	13:02:00	14.704	14.345	0.359	0.828	4.32	-0.468	5.62
2/28/2013	13:17:00	14.697	14.351	0.346	0.798	4.32	-0.438	5.26
2/28/2013	13:32:00	14.694	14.347	0.347	0.801	4.32	-0.441	5.29
2/28/2013	13:47:00	14.689	14.348	0.341	0.787	4.32	-0.427	5.12
2/28/2013	14:02:00	14.692	14.350	0.342	0.789	4.32	-0.429	5.15
2/28/2013	14:17:00	14.690	14.344	0.346	0.798	4.32	-0.438	5.26
2/28/2013	14:32:00	14.696	14.352	0.344	0.794	4.32	-0.434	5.20
2/28/2013	14:47:00	14.689	14.351	0.338	0.780	4.32	-0.420	5.04
2/28/2013	15:02:00	14.695	14.351	0.344	0.794	4.32	-0.434	5.20
2/28/2013	15:17:00	14.700	14.344	0.356	0.821	4.32	-0.461	5.54
2/28/2013	15:32:00	14.696	14.352	0.344	0.794	4.32	-0.434	5.20
2/28/2013	15:47:00	14.692	14.354	0.338	0.780	4.32	-0.420	5.04
2/28/2013	16:02:00	14.684	14.355	0.329	0.759	4.32	-0.399	4.79
2/28/2013	16:17:00	14.689	14.359	0.330	0.761	4.32	-0.401	4.82
2/28/2013	16:32:00	14.708	14.353	0.355	0.819	4.32	-0.459	5.51
2/28/2013	16:47:00	14.697	14.349	0.348	0.803	4.32	-0.443	5.31
2/28/2013	17:02:00	14.696	14.363	0.333	0.768	4.32	-0.408	4.90
2/28/2013	17:17:00	14.707	14.367	0.340	0.784	4.32	-0.424	5.09
2/28/2013	17:32:00	14.700	14.370	0.330	0.761	4.32	-0.401	4.82
2/28/2013	17:47:00	14.707	14.371	0.336	0.775	4.32	-0.415	4.98
2/28/2013	18:02:00	14.703	14.373	0.330	0.761	4.32	-0.401	4.82
2/28/2013	18:17:00	14.709	14.375	0.334	0.771	4.32	-0.411	4.93
2/28/2013	18:32:00	14.707	14.372	0.335	0.773	4.32	-0.413	4.95
2/28/2013	18:47:00	14.716	14.378	0.338	0.780	4.32	-0.420	5.04
2/28/2013	19:02:00	14.718	14.381	0.337	0.777	4.32	-0.417	5.01
2/28/2013	19:17:00	14.715	14.384	0.331	0.764	4.32	-0.404	4.84
2/28/2013	19:32:00	14.720	14.383	0.337	0.777	4.32	-0.417	5.01
2/28/2013	19:47:00	14.720	14.381	0.339	0.782	4.32	-0.422	5.06
2/28/2013	20:02:00	14.711	14.387	0.324	0.747	4.32	-0.387	4.65
2/28/2013	20:17:00	14.716	14.387	0.329	0.759	4.32	-0.399	4.79
2/28/2013	20:32:00	14.719	14.385	0.334	0.771	4.32	-0.411	4.93
2/28/2013	20:47:00	14.719	14.389	0.330	0.761	4.32	-0.401	4.82
2/28/2013	21:02:00	14.719	14.390	0.329	0.759	4.32	-0.399	4.79
2/28/2013	21:17:00	14.722	14.394	0.328	0.757	4.32	-0.397	4.76
2/28/2013	21:32:00	14.723	14.397	0.326	0.752	4.32	-0.392	4.70
2/28/2013	21:47:00	14.729	14.394	0.335	0.773	4.32	-0.413	4.95
2/28/2013	22:02:00	14.725	14.400	0.325	0.750	4.32	-0.390	4.68

2/28/2013	22:17:00	14.729	14.397	0.332	0.766	4.32	-0.406	4.87
2/28/2013	22:32:00	14.731	14.403	0.328	0.757	4.32	-0.397	4.76
2/28/2013	22:47:00	14.712	14.401	0.311	0.717	4.32	-0.357	4.29
2/28/2013	23:02:00	14.728	14.404	0.324	0.747	4.32	-0.387	4.65
2/28/2013	23:17:00	14.730	14.404	0.326	0.752	4.32	-0.392	4.70
2/28/2013	23:32:00	14.724	14.403	0.321	0.741	4.32	-0.381	4.57
2/28/2013	23:47:00	14.728	14.403	0.325	0.750	4.32	-0.390	4.68
3/1/2013	0:02:00	14.727	14.403	0.324	0.747	4.32	-0.387	4.65
3/1/2013	0:17:00	14.731	14.409	0.322	0.743	4.32	-0.383	4.59
3/1/2013	0:32:00	14.732	14.409	0.323	0.745	4.32	-0.385	4.62
3/1/2013	0:47:00	14.733	14.411	0.322	0.743	4.32	-0.383	4.59
3/1/2013	1:02:00	14.735	14.410	0.325	0.750	4.32	-0.390	4.68
3/1/2013	1:17:00	14.731	14.411	0.320	0.738	4.32	-0.378	4.54
3/1/2013	1:32:00	14.728	14.412	0.316	0.729	4.32	-0.369	4.43
3/1/2013	1:47:00	14.731	14.412	0.319	0.736	4.32	-0.376	4.51
3/1/2013	2:02:00	14.728	14.405	0.323	0.745	4.32	-0.385	4.62
3/1/2013	2:17:00	14.727	14.402	0.325	0.750	4.32	-0.390	4.68
3/1/2013	2:32:00	14.724	14.404	0.320	0.738	4.32	-0.378	4.54
3/1/2013	2:47:00	14.724	14.403	0.321	0.741	4.32	-0.381	4.57
3/1/2013	3:02:00	14.726	14.403	0.323	0.745	4.32	-0.385	4.62
3/1/2013	3:17:00	14.723	14.403	0.320	0.738	4.32	-0.378	4.54
3/1/2013	3:32:00	14.722	14.410	0.312	0.720	4.32	-0.360	4.32
3/1/2013	3:47:00	14.723	14.404	0.319	0.736	4.32	-0.376	4.51
3/1/2013	4:02:00	14.720	14.412	0.308	0.711	4.32	-0.351	4.21
3/1/2013	4:17:00	14.725	14.404	0.321	0.741	4.32	-0.381	4.57
3/1/2013	4:32:00	14.727	14.408	0.319	0.736	4.32	-0.376	4.51
3/1/2013	4:47:00	14.721	14.414	0.307	0.708	4.32	-0.348	4.18
3/1/2013	5:02:00	14.725	14.411	0.314	0.724	4.32	-0.364	4.37
3/1/2013	5:17:00	14.721	14.408	0.313	0.722	4.32	-0.362	4.35
3/1/2013	5:32:00	14.729	14.414	0.315	0.727	4.32	-0.367	4.40
3/1/2013	5:47:00	14.726	14.413	0.313	0.722	4.32	-0.362	4.35
3/1/2013	6:02:00	14.730	14.420	0.310	0.715	4.32	-0.355	4.26
3/1/2013	6:17:00	14.731	14.421	0.310	0.715	4.32	-0.355	4.26
3/1/2013	6:32:00	14.730	14.419	0.311	0.717	4.32	-0.357	4.29
3/1/2013	6:47:00	14.731	14.418	0.313	0.722	4.32	-0.362	4.35
3/1/2013	7:02:00	14.732	14.423	0.309	0.713	4.32	-0.353	4.23
3/1/2013	7:17:00	14.733	14.426	0.307	0.708	4.32	-0.348	4.18
3/1/2013	7:32:00	14.731	14.420	0.311	0.717	4.32	-0.357	4.29
3/1/2013	7:47:00	14.733	14.420	0.313	0.722	4.32	-0.362	4.35
3/1/2013	8:02:00	14.735	14.419	0.316	0.729	4.32	-0.369	4.43
3/1/2013	8:17:00	14.732	14.435	0.297	0.685	4.32	-0.325	3.90
3/1/2013	8:32:00	14.741	14.426	0.315	0.727	4.32	-0.367	4.40
3/1/2013	8:47:00	14.740	14.423	0.317	0.731	4.32	-0.371	4.46
3/1/2013	9:02:00	14.739	14.427	0.312	0.720	4.32	-0.360	4.32
3/1/2013	9:17:00	14.735	14.417	0.318	0.734	4.32	-0.374	4.48
3/1/2013	9:32:00	14.741	14.420	0.321	0.741	4.32	-0.381	4.57
3/1/2013	9:47:00	14.737	14.429	0.308	0.711	4.32	-0.351	4.21
3/1/2013	10:02:00	14.748	14.422	0.326	0.752	4.32	-0.392	4.70
3/1/2013	10:17:00	14.735	14.419	0.316	0.729	4.32	-0.369	4.43
3/1/2013	10:32:00	14.732	14.415	0.317	0.731	4.32	-0.371	4.46
3/1/2013	10:47:00	14.733	14.416	0.317	0.731	4.32	-0.371	4.46
3/1/2013	11:02:00	14.731	14.414	0.317	0.731	4.32	-0.371	4.46
3/1/2013	11:17:00	14.729	14.413	0.316	0.729	4.32	-0.369	4.43
3/1/2013	11:32:00	14.728	14.413	0.315	0.727	4.32	-0.367	4.40
3/1/2013	11:47:00	14.727	14.415	0.312	0.720	4.32	-0.360	4.32
3/1/2013	12:02:00	14.725	14.411	0.314	0.724	4.32	-0.364	4.37
3/1/2013	12:17:00	14.721	14.408	0.313	0.722	4.32	-0.362	4.35
3/1/2013	12:32:00	14.719	14.410	0.309	0.713	4.32	-0.353	4.23
3/1/2013	12:47:00	14.715	14.407	0.308	0.711	4.32	-0.351	4.21
3/1/2013	13:02:00	14.716	14.401	0.315	0.727	4.32	-0.367	4.40
3/1/2013	13:17:00	14.707	14.397	0.310	0.715	4.32	-0.355	4.26
3/1/2013	13:32:00	14.711	14.391	0.320	0.738	4.32	-0.378	4.54
3/1/2013	13:47:00	14.705	14.392	0.313	0.722	4.32	-0.362	4.35
3/1/2013	14:02:00	14.702	14.391	0.311	0.717	4.32	-0.357	4.29
3/1/2013	14:17:00	14.704	14.387	0.317	0.731	4.32	-0.371	4.46
3/1/2013	14:32:00	14.432	14.387	0.045	0.104	4.32	0.256	-3.07
3/1/2013	14:47:00	14.419	14.389	0.030	0.069	4.32	0.291	-3.49
3/1/2013	15:02:00	14.425	14.379	0.046	0.106	4.32	0.254	-3.05
3/1/2013	15:17:00	14.419	14.391	0.028	0.065	4.32	0.295	-3.54
3/1/2013	15:32:00	14.400	14.332	0.068	0.157	4.32	0.203	-2.44
3/1/2013	15:47:00	14.362	14.310	0.052	0.120	4.32	0.240	-2.88
3/1/2013	16:02:00	14.340	14.281	0.059	0.136	4.32	0.224	-2.69
3/1/2013	16:17:00	14.298	14.270	0.028	0.065	4.32	0.295	-3.54
3/1/2013	16:32:00	14.374	14.240	0.134	0.309	4.32	0.051	-0.61
3/1/2013	16:47:00	14.303	14.265	0.038	0.088	4.32	0.272	-3.27
3/1/2013	17:02:00	14.295	14.261	0.034	0.078	4.32	0.282	-3.38
3/1/2013	17:17:00	14.303	14.265	0.038	0.088	4.32	0.272	-3.27
3/1/2013	17:32:00	14.301	14.267	0.034	0.078	4.32	0.282	-3.38
3/1/2013	17:47:00	14.301	14.267	0.034	0.078	4.32	0.282	-3.38
3/1/2013	18:02:00	14.304	14.275	0.029	0.067	4.32	0.293	-3.52
3/1/2013	18:17:00	14.309	14.271	0.038	0.088	4.32	0.272	-3.27
3/1/2013	18:32:00	14.306	14.275	0.031	0.072	4.32	0.288	-3.46
3/1/2013	18:47:00	14.314	14.275	0.039	0.090	4.32	0.270	-3.24
3/1/2013	19:02:00	14.312	14.273	0.039	0.090	4.32	0.270	-3.24
3/1/2013	19:17:00	14.309	14.280	0.029	0.067	4.32	0.293	-3.52
3/1/2013	19:32:00	14.313	14.277	0.036	0.083	4.32	0.277	-3.32
3/1/2013	19:47:00	14.312	14.284	0.028	0.065	4.32	0.295	-3.54
3/1/2013	20:02:00	14.316	14.279	0.037	0.085	4.32	0.275	-3.30
3/1/2013	20:17:00	14.310	14.282	0.028	0.065	4.32	0.295	-3.54
3/1/2013	20:32:00	14.316	14.280	0.036	0.083	4.32	0.277	-3.32
3/1/2013	20:47:00	14.314	14.283	0.031	0.072	4.32	0.288	-3.46
3/1/2013	21:02:00	14.316	14.282	0.034	0.078	4.32	0.282	-3.38
3/1/2013	21:17:00	14.319	14.284	0.035	0.081	4.32	0.279	-3.35
3/1/2013	21:32:00	14.320	14.287	0.033	0.076	4.32	0.284	-3.41
3/1/2013	21:47:00	14.317	14.282	0.035	0.081	4.32	0.279	-3.35
3/1/2013	22:02:00	14.316	14.283	0.033	0.076	4.32	0.284	-3.41
3/1/2013	22:17:00	14.315	14.279	0.036	0.083	4.32	0.277	-3.32
3/1/2013	22:32:00	14.311	14.282	0.029	0.067	4.32	0.293	-3.52
3/1/2013	22:47:00	14.318	14.279	0.039	0.090	4.32	0.270	-3.24
3/1/2013	23:02:00	14.317	14.278	0.039	0.090	4.32	0.270	-3.24
3/1/2013	23:17:00	14.314	14.285	0.029	0.067	4.32	0.293	-3.52
3/1/2013	23:32:00	14.309	14.283	0.026	0.060	4.32	0.300	-3.60
3/1/2013	23:47:00	14.312	14.284	0.028	0.065	4.32	0.295	-3.54
3/2/2013	0:02:00	14.314	14.278	0.036	0.083	4.32	0.277	-3.32
3/2/2013	0:17:00	14.315	14.284	0.031	0.072	4.32	0.288	-3.46
3/2/2013	0:32:00	14.312	14.284	0.028	0.065	4.32	0.295	-3.54
3/2/2013	0:47:00	14.319	14.286	0.033	0.076	4.32	0.284	-3.41
3/2/2013	1:02:00	14.313	14.287	0.026	0.060	4.32	0.300	-3.60
3/2/2013	1:17:00	14.314	14.284	0.030	0.069	4.32	0.291	-3.49
3/2/2013	1:32:00	14.312	14.284	0.028	0.065	4.32	0.295	-3.54
3/2/2013	1:47:00	14.315	14.282	0.033	0.076	4.32	0.284	-3.41
3/2/2013	2:02:00	14.311	14.278	0.033	0.076	4.32	0.284	-3.41
3/2/2013	2:17:00	14.306	14.276	0.030	0.069	4.32	0.291	-3.49
3/2/2013	2:32:00	14.310	14.269	0.041	0.095	4.32	0.265	-3.18
3/2/2013	2:47:00	14.305	14.270	0.035	0.081	4.32	0.279	-3.35
3/2/2013	3:02:00	14.306	14.272	0.034	0.078	4.32	0.282	-3.38
3/2/2013	3:17:00	14.306	14.267	0.039	0.090	4.32	0.270	-3.24
3/2/2013	3:32:00	14.298	14.266	0.032	0.074	4.32	0.286	-3.43
3/2/2013	3:47:00	14.299	14.269	0.030	0.069	4.32	0.291	-3.49
3/2/2013	4:02:00	14.301	14.270	0.031	0.072	4.32	0.288	-3.46
3/2/2013	4:17:00	14.298	14.269	0.029	0.067	4.32	0.293	-3.52
3/2/2013	4:32:00	14.304	14.265	0.039	0.090	4.32	0.270	-3.24
3/2/2013	4:47:00	14.300	14.263	0.037	0.085	4.32	0.275	-3.30
3/2/2013	5:02:00	14.302	14.268	0.034	0.078	4.32	0.282	-3.38
3/2/2013	5:17:00	14.304	14.265	0.039	0.090	4.32	0.270	-3.24
3/2/2013	5:32:00	14.303	14.269	0.034	0.078	4.32	0.282	-3.38
3/2/2013	5:47:00	14.301	14.263	0.038	0.088	4.32	0.272	-3.27
3/2/2013	6:02:00	14.306	14.269	0.037	0.085	4.32	0.275	-3.30
3/2/2013	6:17:00	14.308	14.261	0.047	0.108	4.32	0.252	-3.02
3/2/2013	6:32:00	14.300	14.270	0.030	0.069	4.32	0.291	-3.49
3/2/2013	6:47:00	14.308	14.270	0.038	0.088	4.32	0.272	-3.27
3/2/2013	7:02:00	14.304	14.273	0.031	0.072	4.32	0.288	-3.46
3/2/2013	7:17:00	14.305	14.269	0.036	0.083	4.32	0.277	-3.32

3/2/2013	7:32:00	14.305	14.269	0.036	0.083	4.32	0.277	-3.32
3/2/2013	7:47:00	14.313	14.275	0.038	0.088	4.32	0.272	-3.27
3/2/2013	8:02:00	14.316	14.279	0.037	0.085	4.32	0.275	-3.30
3/2/2013	8:17:00	14.315	14.282	0.033	0.076	4.32	0.284	-3.41
3/2/2013	8:32:00	14.317	14.281	0.036	0.083	4.32	0.277	-3.32
3/2/2013	8:47:00	14.314	14.285	0.029	0.067	4.32	0.293	-3.52
3/2/2013	9:02:00	14.315	14.284	0.031	0.072	4.32	0.288	-3.46
3/2/2013	9:17:00	14.318	14.284	0.034	0.078	4.32	0.282	-3.38
3/2/2013	9:32:00	14.317	14.282	0.035	0.081	4.32	0.279	-3.35
3/2/2013	9:47:00	14.318	14.283	0.035	0.081	4.32	0.279	-3.35
3/2/2013	10:02:00	14.320	14.281	0.039	0.090	4.32	0.270	-3.24
3/2/2013	10:17:00	14.321	14.282	0.039	0.090	4.32	0.270	-3.24
3/2/2013	10:32:00	14.321	14.277	0.044	0.102	4.32	0.258	-3.10
3/2/2013	10:47:00	14.315	14.280	0.035	0.081	4.32	0.279	-3.35
3/2/2013	11:02:00	14.313	14.279	0.034	0.078	4.32	0.282	-3.38
3/2/2013	11:17:00	14.316	14.279	0.037	0.085	4.32	0.275	-3.30
3/2/2013	11:32:00	14.325	14.278	0.047	0.108	4.32	0.252	-3.02
3/2/2013	11:47:00	14.319	14.282	0.037	0.085	4.32	0.275	-3.30
3/2/2013	12:02:00	14.319	14.273	0.046	0.106	4.32	0.254	-3.05
3/2/2013	12:17:00	14.311	14.274	0.037	0.085	4.32	0.275	-3.30
3/2/2013	12:32:00	14.313	14.274	0.039	0.090	4.32	0.270	-3.24
3/2/2013	12:47:00	14.304	14.269	0.035	0.081	4.32	0.279	-3.35
3/2/2013	13:02:00	14.301	14.268	0.033	0.076	4.32	0.284	-3.41
3/2/2013	13:17:00	14.299	14.263	0.036	0.083	4.32	0.277	-3.32
3/2/2013	13:32:00	14.296	14.261	0.035	0.081	4.32	0.279	-3.35
3/2/2013	13:47:00	14.293	14.260	0.033	0.076	4.32	0.284	-3.41
3/2/2013	14:02:00	14.294	14.250	0.044	0.102	4.32	0.258	-3.10
3/2/2013	14:17:00	14.290	14.252	0.038	0.088	4.32	0.272	-3.27
3/2/2013	14:32:00	14.284	14.253	0.031	0.072	4.32	0.288	-3.46
3/2/2013	14:47:00	14.287	14.247	0.040	0.092	4.32	0.268	-3.21
3/2/2013	15:02:00	14.281	14.244	0.037	0.085	4.32	0.275	-3.30
3/2/2013	15:17:00	14.284	14.251	0.033	0.076	4.32	0.284	-3.41
3/2/2013	15:32:00	14.283	14.245	0.038	0.088	4.32	0.272	-3.27
3/2/2013	15:47:00	14.283	14.244	0.039	0.090	4.32	0.270	-3.24
3/2/2013	16:02:00	14.286	14.248	0.038	0.088	4.32	0.272	-3.27
3/2/2013	16:17:00	14.296	14.254	0.042	0.097	4.32	0.263	-3.16
3/2/2013	16:32:00	14.295	14.256	0.039	0.090	4.32	0.270	-3.24
3/2/2013	16:47:00	14.292	14.263	0.029	0.067	4.32	0.293	-3.52
3/2/2013	17:02:00	14.296	14.264	0.032	0.074	4.32	0.286	-3.43
3/2/2013	17:17:00	14.296	14.253	0.043	0.099	4.32	0.261	-3.13
3/2/2013	17:32:00	14.292	14.255	0.037	0.085	4.32	0.275	-3.30
3/2/2013	17:47:00	14.294	14.257	0.037	0.085	4.32	0.275	-3.30
3/2/2013	18:02:00	14.293	14.259	0.034	0.078	4.32	0.282	-3.38
3/2/2013	18:17:00	14.296	14.265	0.031	0.072	4.32	0.288	-3.46
3/2/2013	18:32:00	14.299	14.263	0.036	0.083	4.32	0.277	-3.32
3/2/2013	18:47:00	14.303	14.268	0.035	0.081	4.32	0.279	-3.35
3/2/2013	19:02:00	14.301	14.275	0.026	0.060	4.32	0.300	-3.60
3/2/2013	19:17:00	14.309	14.270	0.039	0.090	4.32	0.270	-3.24
3/2/2013	19:32:00	14.313	14.271	0.042	0.097	4.32	0.263	-3.16
3/2/2013	19:47:00	14.314	14.278	0.036	0.083	4.32	0.277	-3.32
3/2/2013	20:02:00	14.315	14.276	0.039	0.090	4.32	0.270	-3.24
3/2/2013	20:17:00	14.315	14.279	0.036	0.083	4.32	0.277	-3.32
3/2/2013	20:32:00	14.318	14.285	0.033	0.076	4.32	0.284	-3.41
3/2/2013	20:47:00	14.316	14.280	0.036	0.083	4.32	0.277	-3.32
3/2/2013	21:02:00	14.322	14.288	0.034	0.078	4.32	0.282	-3.38
3/2/2013	21:17:00	14.322	14.293	0.029	0.067	4.32	0.293	-3.52
3/2/2013	21:32:00	14.329	14.294	0.035	0.081	4.32	0.279	-3.35
3/2/2013	21:47:00	14.325	14.295	0.030	0.069	4.32	0.291	-3.49
3/2/2013	22:02:00	14.332	14.295	0.037	0.085	4.32	0.275	-3.30
3/2/2013	22:17:00	14.332	14.294	0.038	0.088	4.32	0.272	-3.27
3/2/2013	22:32:00	14.330	14.293	0.037	0.085	4.32	0.275	-3.30
3/2/2013	22:47:00	14.334	14.295	0.039	0.090	4.32	0.270	-3.24
3/2/2013	23:02:00	14.338	14.293	0.045	0.104	4.32	0.256	-3.07
3/2/2013	23:17:00	14.335	14.294	0.041	0.095	4.32	0.265	-3.18
3/2/2013	23:32:00	14.332	14.292	0.040	0.092	4.32	0.268	-3.21
3/2/2013	23:47:00	14.332	14.291	0.041	0.095	4.32	0.265	-3.18
3/3/2013	0:02:00	14.337	14.291	0.046	0.106	4.32	0.254	-3.05
3/3/2013	0:17:00	14.330	14.293	0.037	0.085	4.32	0.275	-3.30
3/3/2013	0:32:00	14.331	14.290	0.041	0.095	4.32	0.265	-3.18
3/3/2013	0:47:00	14.332	14.297	0.035	0.081	4.32	0.279	-3.35
3/3/2013	1:02:00	14.333	14.291	0.042	0.097	4.32	0.263	-3.16
3/3/2013	1:17:00	14.333	14.295	0.038	0.088	4.32	0.272	-3.27
3/3/2013	1:32:00	14.333	14.294	0.039	0.090	4.32	0.270	-3.24
3/3/2013	1:47:00	14.333	14.297	0.036	0.083	4.32	0.277	-3.32
3/3/2013	2:02:00	14.337	14.293	0.044	0.102	4.32	0.258	-3.10
3/3/2013	2:17:00	14.331	14.292	0.039	0.090	4.32	0.270	-3.24
3/3/2013	2:32:00	14.330	14.286	0.044	0.102	4.32	0.258	-3.10
3/3/2013	2:47:00	14.331	14.285	0.046	0.106	4.32	0.254	-3.05
3/3/2013	3:02:00	14.325	14.290	0.035	0.081	4.32	0.279	-3.35
3/3/2013	3:17:00	14.327	14.285	0.042	0.097	4.32	0.263	-3.16
3/3/2013	3:32:00	14.323	14.284	0.039	0.090	4.32	0.270	-3.24
3/3/2013	3:47:00	14.331	14.285	0.046	0.106	4.32	0.254	-3.05
3/3/2013	4:02:00	14.318	14.283	0.035	0.081	4.32	0.279	-3.35
3/3/2013	4:17:00	14.325	14.287	0.038	0.088	4.32	0.272	-3.27
3/3/2013	4:32:00	14.328	14.289	0.039	0.090	4.32	0.270	-3.24
3/3/2013	4:47:00	14.330	14.292	0.038	0.088	4.32	0.272	-3.27
3/3/2013	5:02:00	14.328	14.293	0.035	0.081	4.32	0.279	-3.35
3/3/2013	5:17:00	14.329	14.296	0.033	0.076	4.32	0.284	-3.41
3/3/2013	5:32:00	14.331	14.298	0.033	0.076	4.32	0.284	-3.41
3/3/2013	5:47:00	14.340	14.291	0.049	0.113	4.32	0.247	-2.96
3/3/2013	6:02:00	14.340	14.297	0.043	0.099	4.32	0.261	-3.13
3/3/2013	6:17:00	14.344	14.300	0.044	0.102	4.32	0.258	-3.10
3/3/2013	6:32:00	14.337	14.303	0.034	0.078	4.32	0.282	-3.38
3/3/2013	6:47:00	14.345	14.304	0.041	0.095	4.32	0.265	-3.18
3/3/2013	7:02:00	14.345	14.303	0.042	0.097	4.32	0.263	-3.16
3/3/2013	7:17:00	14.343	14.307	0.036	0.083	4.32	0.277	-3.32
3/3/2013	7:32:00	14.343	14.305	0.038	0.088	4.32	0.272	-3.27
3/3/2013	7:47:00	14.348	14.309	0.039	0.090	4.32	0.270	-3.24
3/3/2013	8:02:00	14.344	14.307	0.037	0.085	4.32	0.275	-3.30
3/3/2013	8:17:00	14.352	14.308	0.044	0.102	4.32	0.258	-3.10
3/3/2013	8:32:00	14.352	14.309	0.043	0.099	4.32	0.261	-3.13
3/3/2013	8:47:00	14.346	14.309	0.037	0.085	4.32	0.275	-3.30
3/3/2013	9:02:00	14.349	14.312	0.037	0.085	4.32	0.275	-3.30
3/3/2013	9:17:00	14.353	14.310	0.043	0.099	4.32	0.261	-3.13
3/3/2013	9:32:00	14.354	14.308	0.046	0.106	4.32	0.254	-3.05
3/3/2013	9:47:00	14.353	14.311	0.042	0.097	4.32	0.263	-3.16
3/3/2013	10:02:00	14.350	14.312	0.038	0.088	4.32	0.272	-3.27
3/3/2013	10:17:00	14.350	14.303	0.047	0.108	4.32	0.252	-3.02
3/3/2013	10:32:00	14.349	14.307	0.042	0.097	4.32	0.263	-3.16
3/3/2013	10:47:00	14.347	14.306	0.041	0.095	4.32	0.265	-3.18
3/3/2013	11:02:00	14.348	14.308	0.040	0.092	4.32	0.268	-3.21
3/3/2013	11:17:00	14.346	14.303	0.043	0.099	4.32	0.261	-3.13
3/3/2013	11:32:00	14.343	14.306	0.037	0.085	4.32	0.275	-3.30
3/3/2013	11:47:00	14.343	14.303	0.040	0.092	4.32	0.268	-3.21
3/3/2013	12:02:00	14.338	14.303	0.035	0.081	4.32	0.279	-3.35
3/3/2013	12:17:00	14.342	14.294	0.048	0.111	4.32	0.249	-2.99
3/3/2013	12:32:00	14.338	14.295	0.043	0.099	4.32	0.261	-3.13
3/3/2013	12:47:00	14.332	14.289	0.043	0.099	4.32	0.261	-3.13
3/3/2013	13:02:00	14.335	14.285	0.050	0.115	4.32	0.245	-2.94
3/3/2013	13:17:00	14.323	14.280	0.043	0.099	4.32	0.261	-3.13
3/3/2013	13:32:00	14.326	14.277	0.049	0.113	4.32	0.247	-2.96
3/3/2013	13:47:00	14.321	14.276	0.045	0.104	4.32	0.256	-3.07
3/3/2013	14:02:00	14.314	14.275	0.039	0.090	4.32	0.270	-3.24
3/3/2013	14:17:00	14.314	14.275	0.039	0.090	4.32	0.270	-3.24
3/3/2013	14:32:00	14.313	14.273	0.040	0.092	4.32	0.268	-3.21
3/3/2013	14:47:00	14.318	14.273	0.045	0.104	4.32	0.256	-3.07
3/3/2013	15:02:00	14.319	14.273	0.046	0.106	4.32	0.254	-3.05
3/3/2013	15:17:00	14.318	14.271	0.047	0.108	4.32	0.252	-3.02
3/3/2013	15:32:00	14.308	14.268	0.040	0.092	4.32	0.268	-3.21
3/3/2013	15:47:00	14.308	14.269	0.039	0.090	4.32	0.270	-3.24
3/3/2013	16:02:00	14.307	14.270	0.037	0.085	4.32	0.275	-3.30
3/3/2013	16:17:00	14.311	14.263	0.048	0.111	4.32	0.249	-2.99
3/3/2013	16:32:00	14.315	14.271	0.044	0.102	4.32	0.258	-3.10

3/3/2013	16:47:00	14.311	14.266	0.045	0.104	4.32	0.256	-3.07
3/3/2013	17:02:00	14.311	14.271	0.040	0.092	4.32	0.268	-3.21
3/3/2013	17:17:00	14.307	14.271	0.036	0.083	4.32	0.277	-3.32
3/3/2013	17:32:00	14.314	14.274	0.040	0.092	4.32	0.268	-3.21
3/3/2013	17:47:00	14.319	14.275	0.044	0.102	4.32	0.258	-3.10
3/3/2013	18:02:00	14.319	14.278	0.041	0.095	4.32	0.265	-3.18
3/3/2013	18:17:00	14.325	14.284	0.041	0.095	4.32	0.265	-3.18
3/3/2013	18:32:00	14.325	14.289	0.036	0.083	4.32	0.277	-3.32
3/3/2013	18:47:00	14.330	14.290	0.040	0.092	4.32	0.268	-3.21
3/3/2013	19:02:00	14.334	14.295	0.039	0.090	4.32	0.270	-3.24
3/3/2013	19:17:00	14.339	14.302	0.037	0.085	4.32	0.275	-3.30
3/3/2013	19:32:00	14.341	14.301	0.040	0.092	4.32	0.268	-3.21
3/3/2013	19:47:00	14.350	14.305	0.045	0.104	4.32	0.256	-3.07
3/3/2013	20:02:00	14.347	14.305	0.042	0.097	4.32	0.263	-3.16
3/3/2013	20:17:00	14.351	14.305	0.046	0.106	4.32	0.254	-3.05
3/3/2013	20:32:00	14.353	14.309	0.044	0.102	4.32	0.258	-3.10
3/3/2013	20:47:00	14.353	14.314	0.039	0.090	4.32	0.270	-3.24
3/3/2013	21:02:00	14.360	14.317	0.043	0.099	4.32	0.261	-3.13
3/3/2013	21:17:00	14.368	14.320	0.048	0.111	4.32	0.249	-2.99
3/3/2013	21:32:00	14.365	14.321	0.044	0.102	4.32	0.258	-3.10
3/3/2013	21:47:00	14.365	14.323	0.042	0.097	4.32	0.263	-3.16
3/3/2013	22:02:00	14.366	14.325	0.041	0.095	4.32	0.265	-3.18
3/3/2013	22:17:00	14.370	14.327	0.043	0.099	4.32	0.261	-3.13
3/3/2013	22:32:00	14.369	14.328	0.041	0.095	4.32	0.265	-3.18
3/3/2013	22:47:00	14.365	14.327	0.038	0.088	4.32	0.272	-3.27
3/3/2013	23:02:00	14.368	14.325	0.043	0.099	4.32	0.261	-3.13
3/3/2013	23:17:00	14.363	14.328	0.035	0.081	4.32	0.279	-3.35
3/3/2013	23:32:00	14.365	14.329	0.036	0.083	4.32	0.277	-3.32
3/3/2013	23:47:00	14.364	14.323	0.041	0.095	4.32	0.265	-3.18
3/4/2013	0:02:00	14.372	14.328	0.044	0.102	4.32	0.258	-3.10
3/4/2013	0:17:00	14.364	14.322	0.042	0.097	4.32	0.263	-3.16
3/4/2013	0:32:00	14.368	14.326	0.042	0.097	4.32	0.263	-3.16
3/4/2013	0:47:00	14.369	14.326	0.043	0.099	4.32	0.261	-3.13
3/4/2013	1:02:00	14.371	14.330	0.041	0.095	4.32	0.265	-3.18
3/4/2013	1:17:00	14.371	14.331	0.040	0.092	4.32	0.268	-3.21
3/4/2013	1:32:00	14.374	14.332	0.042	0.097	4.32	0.263	-3.16
3/4/2013	1:47:00	14.375	14.336	0.039	0.090	4.32	0.270	-3.24
3/4/2013	2:02:00	14.378	14.336	0.042	0.097	4.32	0.263	-3.16
3/4/2013	2:17:00	14.380	14.339	0.041	0.095	4.32	0.265	-3.18
3/4/2013	2:32:00	14.376	14.335	0.041	0.095	4.32	0.265	-3.18
3/4/2013	2:47:00	14.383	14.335	0.048	0.111	4.32	0.249	-2.99
3/4/2013	3:02:00	14.382	14.342	0.040	0.092	4.32	0.268	-3.21
3/4/2013	3:17:00	14.383	14.342	0.041	0.095	4.32	0.265	-3.18
3/4/2013	3:32:00	14.387	14.344	0.043	0.099	4.32	0.261	-3.13
3/4/2013	3:47:00	14.386	14.343	0.043	0.099	4.32	0.261	-3.13
3/4/2013	4:02:00	14.385	14.346	0.039	0.090	4.32	0.270	-3.24
3/4/2013	4:17:00	14.389	14.347	0.042	0.097	4.32	0.263	-3.16
3/4/2013	4:32:00	14.391	14.347	0.044	0.102	4.32	0.258	-3.10
3/4/2013	4:47:00	14.397	14.352	0.045	0.104	4.32	0.256	-3.07
3/4/2013	5:02:00	14.399	14.361	0.038	0.088	4.32	0.272	-3.27
3/4/2013	5:17:00	14.397	14.359	0.038	0.088	4.32	0.272	-3.27
3/4/2013	5:32:00	14.401	14.359	0.042	0.097	4.32	0.263	-3.16
3/4/2013	5:47:00	14.405	14.369	0.036	0.083	4.32	0.277	-3.32
3/4/2013	6:02:00	14.408	14.362	0.046	0.106	4.32	0.254	-3.05
3/4/2013	6:17:00	14.414	14.370	0.044	0.102	4.32	0.258	-3.10
3/4/2013	6:32:00	14.410	14.367	0.043	0.099	4.32	0.261	-3.13
3/4/2013	6:47:00	14.410	14.371	0.039	0.090	4.32	0.270	-3.24
3/4/2013	7:02:00	14.417	14.376	0.041	0.095	4.32	0.265	-3.18
3/4/2013	7:17:00	14.420	14.382	0.038	0.088	4.32	0.272	-3.27
3/4/2013	7:32:00	14.423	14.385	0.038	0.088	4.32	0.272	-3.27
3/4/2013	7:47:00	14.426				4.32		
3/4/2013	8:02:00	14.430				4.32		


xs 2
graduated cylinder
rainfall data.
1.6 inches between
1/16 and 1/18
Water Level (in)
35
25
15
5
-5
-15
-25
-35
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
12/6/12
12/20/12
1/3/13
1/17/13
1/31/13
2/14/13
2/28/13
3/14/13
Date
Series1
zero flow
flood stage
rainfall

MONITORING GAUGE DATA SHEET:
Gauge #2

NOTES:

	2012
Begin Date for Calculations:	9/22/2012
End Date for Calculations:	12/6/2012
Water Table Criteria (depth in inches):	-12.0
Minimum Number of Days to Satisfy Criteria:	35
Min. Percent of Growing Season to Satisfy Criteria:	12.5%

Most Consecutive Days Meeting Criteria =	0.0
Percent Consecutive Days in Growing Season =	0.0%
Total Days Meeting Criteria =	0.0
Percent Cumulative Days in Growing Season =	0.0%
Number of Instances Meeting Criteria =	0

Date	Time	Gage Pressure Reading (psi)	Barotroll Pressure (psi)	Pressure Difference (psi)	Depth of Water (ft)	Point of Zero Flow (in)	Depth to Groundwater (ft)	Water Level Depth (in)	Rainfall (in)	2012 Flag	2012 Count
12/6/2012	13:32:00	14.607	14.555	0.052	0.120	2.16	0.060	-0.72			0.0
12/6/2012	13:47:00	14.722	14.553	0.169	0.390	2.16	-0.210	2.52			0.0
12/6/2012	14:02:00	14.720	14.551	0.169	0.390	2.16	-0.210	2.52			0.0
12/6/2012	14:17:00	14.718	14.552	0.166	0.383	2.16	-0.203	2.44			0.0
12/6/2012	14:32:00	14.717	14.559	0.158	0.365	2.16	-0.185	2.21			0.0
12/6/2012	14:47:00	14.716	14.555	0.161	0.371	2.16	-0.191	2.30			0.0
12/6/2012	15:02:00	14.719	14.559	0.160	0.369	2.16	-0.189	2.27			0.0
12/6/2012	15:17:00	14.712	14.555	0.157	0.362	2.16	-0.182	2.19			0.0
12/6/2012	15:32:00	14.715	14.557	0.158	0.365	2.16	-0.185	2.21			0.0
12/6/2012	15:47:00	14.722	14.561	0.161	0.371	2.16	-0.191	2.30			0.0
12/6/2012	16:02:00	14.720	14.560	0.160	0.369	2.16	-0.189	2.27			0.0
12/6/2012	16:17:00	14.720	14.556	0.164	0.378	2.16	-0.198	2.38			0.0
12/6/2012	16:32:00	14.724	14.558	0.166	0.383	2.16	-0.203	2.44			
12/6/2012	16:47:00	14.723	14.568	0.155	0.358	2.16	-0.178	2.13			
12/6/2012	17:02:00	14.721	14.565	0.156	0.360	2.16	-0.180	2.16			
12/6/2012	17:17:00	14.719	14.559	0.160	0.369	2.16	-0.189	2.27			
12/6/2012	17:32:00	14.721	14.560	0.161	0.371	2.16	-0.191	2.30			
12/6/2012	17:47:00	14.725	14.560	0.165	0.381	2.16	-0.201	2.41			
12/6/2012	18:02:00	14.727	14.566	0.161	0.371	2.16	-0.191	2.30			
12/6/2012	18:17:00	14.720	14.563	0.157	0.362	2.16	-0.182	2.19			
12/6/2012	18:32:00	14.724	14.567	0.157	0.362	2.16	-0.182	2.19			
12/6/2012	18:47:00	14.724	14.566	0.158	0.365	2.16	-0.185	2.21			
12/6/2012	19:02:00	14.726	14.566	0.160	0.369	2.16	-0.189	2.27			
12/6/2012	19:17:00	14.724	14.561	0.163	0.376	2.16	-0.196	2.35			
12/6/2012	19:32:00	14.728	14.559	0.169	0.390	2.16	-0.210	2.52			
12/6/2012	19:47:00	14.729	14.559	0.170	0.392	2.16	-0.212	2.55			
12/6/2012	20:02:00	14.727	14.556	0.171	0.394	2.16	-0.214	2.57			
12/6/2012	20:17:00	14.725	14.557	0.168	0.388	2.16	-0.208	2.49			
12/6/2012	20:32:00	14.725	14.553	0.172	0.397	2.16	-0.217	2.60			
12/6/2012	20:47:00	14.717	14.556	0.161	0.371	2.16	-0.191	2.30			
12/6/2012	21:02:00	14.720	14.548	0.172	0.397	2.16	-0.217	2.60			
12/6/2012	21:17:00	14.720	14.550	0.170	0.392	2.16	-0.212	2.55			
12/6/2012	21:32:00	14.719	14.554	0.165	0.381	2.16	-0.201	2.41			
12/6/2012	21:47:00	14.718	14.556	0.162	0.374	2.16	-0.194	2.32			
12/6/2012	22:02:00	14.716	14.554	0.162	0.374	2.16	-0.194	2.32			
12/6/2012	22:17:00	14.717	14.555	0.162	0.374	2.16	-0.194	2.32			
12/6/2012	22:32:00	14.716	14.551	0.165	0.381	2.16	-0.201	2.41			
12/6/2012	22:47:00	14.718	14.547	0.171	0.394	2.16	-0.214	2.57			
12/6/2012	23:02:00	14.713	14.553	0.160	0.369	2.16	-0.189	2.27			
12/6/2012	23:17:00	14.715	14.548	0.167	0.385	2.16	-0.205	2.46			
12/6/2012	23:32:00	14.717	14.544	0.173	0.399	2.16	-0.219	2.63			
12/6/2012	23:47:00	14.714	14.539	0.175	0.404	2.16	-0.224	2.68			
12/7/2012	0:02:00	14.706	14.540	0.166	0.383	2.16	-0.203	2.44			
12/7/2012	0:17:00	14.711	14.537	0.174	0.401	2.16	-0.221	2.66			
12/7/2012	0:32:00	14.711	14.533	0.178	0.411	2.16	-0.231	2.77			
12/7/2012	0:47:00	14.706	14.538	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	1:02:00	14.704	14.538	0.166	0.383	2.16	-0.203	2.44			
12/7/2012	1:17:00	14.704	14.538	0.166	0.383	2.16	-0.203	2.44			
12/7/2012	1:32:00	14.702	14.534	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	1:47:00	14.701	14.531	0.170	0.392	2.16	-0.212	2.55			
12/7/2012	2:02:00	14.698	14.529	0.169	0.390	2.16	-0.210	2.52			
12/7/2012	2:17:00	14.699	14.531	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	2:32:00	14.694	14.526	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	2:47:00	14.698	14.528	0.170	0.392	2.16	-0.212	2.55			
12/7/2012	3:02:00	14.693	14.525	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	3:17:00	14.690	14.522	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	3:32:00	14.687	14.519	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	3:47:00	14.690	14.525	0.165	0.381	2.16	-0.201	2.41			
12/7/2012	4:02:00	14.685	14.518	0.167	0.385	2.16	-0.205	2.46			
12/7/2012	4:17:00	14.683	14.519	0.164	0.378	2.16	-0.198	2.38			
12/7/2012	4:32:00	14.683	14.519	0.164	0.378	2.16	-0.198	2.38			
12/7/2012	4:47:00	14.687	14.516	0.171	0.394	2.16	-0.214	2.57			
12/7/2012	5:02:00	14.681	14.515	0.166	0.383	2.16	-0.203	2.44			
12/7/2012	5:17:00	14.684	14.523	0.161	0.371	2.16	-0.191	2.30			
12/7/2012	5:32:00	14.683	14.522	0.161	0.371	2.16	-0.191	2.30			
12/7/2012	5:47:00	14.682	14.525	0.157	0.362	2.16	-0.182	2.19			
12/7/2012	6:02:00	14.681	14.522	0.159	0.367	2.16	-0.187	2.24			
12/7/2012	6:17:00	14.685	14.522	0.163	0.376	2.16	-0.196	2.35			
12/7/2012	6:32:00	14.684	14.523	0.161	0.371	2.16	-0.191	2.30			
12/7/2012	6:47:00	14.683	14.521	0.162	0.374	2.16	-0.194	2.32			
12/7/2012	7:02:00	14.684	14.521	0.163	0.376	2.16	-0.196	2.35			
12/7/2012	7:17:00	14.682	14.519	0.163	0.376	2.16	-0.196	2.35			
12/7/2012	7:32:00	14.681	14.521	0.160	0.369	2.16	-0.189	2.27			
12/7/2012	7:47:00	14.685	14.519	0.166	0.383	2.16	-0.203	2.44			
12/7/2012	8:02:00	14.685	14.524	0.161	0.371	2.16	-0.191	2.30			
12/7/2012	8:17:00	14.686	14.518	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	8:32:00	14.686	14.524	0.162	0.374	2.16	-0.194	2.32			
12/7/2012	8:47:00	14.684	14.524	0.160	0.369	2.16	-0.189	2.27			
12/7/2012	9:02:00	14.681	14.525	0.156	0.360	2.16	-0.180	2.16			
12/7/2012	9:17:00	14.685	14.520	0.165	0.381	2.16	-0.201	2.41			
12/7/2012	9:32:00	14.690	14.524	0.166	0.383	2.16	-0.203	2.44			
12/7/2012	9:47:00	14.687	14.518	0.169	0.390	2.16	-0.210	2.52			
12/7/2012	10:02:00	14.684	14.516	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	10:17:00	14.687	14.514	0.173	0.399	2.16	-0.219	2.63			
12/7/2012	10:32:00	14.687	14.511	0.176	0.406	2.16	-0.226	2.71			
12/7/2012	10:47:00	14.678	14.506	0.172	0.397	2.16	-0.217	2.60			
12/7/2012	11:02:00	14.678	14.495	0.183	0.422	2.16	-0.242	2.91			
12/7/2012	11:17:00	14.674	14.492	0.182	0.420	2.16	-0.240	2.88			
12/7/2012	11:32:00	14.671	14.490	0.181	0.418	2.16	-0.238	2.85			
12/7/2012	11:47:00	14.671	14.488	0.183	0.422	2.16	-0.242	2.91			
12/7/2012	12:02:00	14.663	14.481	0.182	0.420	2.16	-0.240	2.88			
12/7/2012	12:17:00	14.659	14.477	0.182	0.420	2.16	-0.240	2.88			
12/7/2012	12:32:00	14.655	14.477	0.178	0.411	2.16	-0.231	2.77			
12/7/2012	12:47:00	14.650	14.477	0.173	0.399	2.16	-0.219	2.63			
12/7/2012	13:02:00	14.650	14.476	0.174	0.401	2.16	-0.221	2.66			
12/7/2012	13:17:00	14.642	14.471	0.171	0.394	2.16	-0.214	2.57			
12/7/2012	13:32:00	14.640	14.467	0.173	0.399	2.16	-0.219	2.63			
12/7/2012	13:47:00	14.637	14.469	0.168	0.388	2.16	-0.208	2.49			
12/7/2012	14:02:00	14.634	14.471	0.163	0.376	2.16	-0.196	2.35			
12/7/2012	14:17:00	14.628	14.465	0.163	0.376	2.16	-0.196	2.35			
12/7/2012	14:32:00	14.638	14.468	0.170	0.392	2.16	-0.212	2.55			
12/7/2012	14:47:00	14.634	14.467	0.167	0.385	2.16	-0.205	2.46			
12/7/2012	15:02:00	14.630	14.470	0.160	0.369	2.16	-0.189	2.27			
12/7/2012	15:17:00	14.634	14.471	0.163	0.376	2.16	-0.196	2.35			
12/7/2012	15:32:00	14.632	14.470	0.162	0.374	2.16	-0.194	2.32			
12/7/2012	15:47:00	14.632	14.466	0.166	0.383	2.16	-0.203	2.44			
12/7/2012	16:02:00	14.630	14.469	0.161	0.371	2.16	-0.191	2.30			
12/7/2012	16:17:00	14.634	14.473	0.161	0.371	2.16	-0.191	2.30			
12/7/2012	16:32:00	14.633	14.472	0.161	0.371	2.16	-0.191	2.30			
12/7/2012	16:47:00	14.634	14.474	0.160	0.369	2.16	-0.189	2.27			
12/7/2012	17:02:00	14.630	14.475	0.155	0.358	2.16	-0.178	2.13			
12/7/2012	17:17:00	14.625	14.469	0.156	0.360	2.16	-0.180	2.16			
12/7/2012	17:32:00	14.635	14.471	0.164	0.378	2.16	-0.198	2.38			
12/7/2012	17:47:00	14.633	14.471	0.162	0.374	2.16	-0.194	2.32			
12/7/2012	18:02:00	14.633	14.473	0.160	0.369	2.16	-0.189	2.27			

12/7/2012	18:17:00	14.632	14.472	0.160	0.369	2.16	-0.189	2.27
12/7/2012	18:32:00	14.632	14.471	0.161	0.371	2.16	-0.191	2.30
12/7/2012	18:47:00	14.632	14.466	0.166	0.383	2.16	-0.203	2.44
12/7/2012	19:02:00	14.637	14.470	0.167	0.385	2.16	-0.205	2.46
12/7/2012	19:17:00	14.635	14.465	0.170	0.392	2.16	-0.212	2.55
12/7/2012	19:32:00	14.637	14.465	0.172	0.397	2.16	-0.217	2.60
12/7/2012	19:47:00	14.633	14.469	0.164	0.378	2.16	-0.198	2.38
12/7/2012	20:02:00	14.627	14.468	0.159	0.367	2.16	-0.187	2.24
12/7/2012	20:17:00	14.625	14.466	0.159	0.367	2.16	-0.187	2.24
12/7/2012	20:32:00	14.626	14.464	0.162	0.374	2.16	-0.194	2.32
12/7/2012	20:47:00	14.628	14.467	0.161	0.371	2.16	-0.191	2.30
12/7/2012	21:02:00	14.629	14.466	0.163	0.376	2.16	-0.196	2.35
12/7/2012	21:17:00	14.628	14.467	0.161	0.371	2.16	-0.191	2.30
12/7/2012	21:32:00	14.629	14.467	0.162	0.374	2.16	-0.194	2.32
12/7/2012	21:47:00	14.635	14.469	0.166	0.383	2.16	-0.203	2.44
12/7/2012	22:02:00	14.628	14.470	0.158	0.365	2.16	-0.185	2.21
12/7/2012	22:17:00	14.628	14.470	0.158	0.365	2.16	-0.185	2.21
12/7/2012	22:32:00	14.629	14.468	0.161	0.371	2.16	-0.191	2.30
12/7/2012	22:47:00	14.629	14.467	0.162	0.374	2.16	-0.194	2.32
12/7/2012	23:02:00	14.632	14.463	0.169	0.390	2.16	-0.210	2.52
12/7/2012	23:17:00	14.635	14.467	0.168	0.388	2.16	-0.208	2.49
12/7/2012	23:32:00	14.637	14.459	0.178	0.411	2.16	-0.231	2.77
12/7/2012	23:47:00	14.630	14.465	0.165	0.381	2.16	-0.201	2.41
12/8/2012	0:02:00	14.631	14.459	0.172	0.397	2.16	-0.217	2.60
12/8/2012	0:17:00	14.631	14.459	0.172	0.397	2.16	-0.217	2.60
12/8/2012	0:32:00	14.629	14.465	0.164	0.378	2.16	-0.198	2.38
12/8/2012	0:47:00	14.626	14.461	0.165	0.381	2.16	-0.201	2.41
12/8/2012	1:02:00	14.624	14.465	0.159	0.367	2.16	-0.187	2.24
12/8/2012	1:17:00	14.626	14.464	0.162	0.374	2.16	-0.194	2.32
12/8/2012	1:32:00	14.625	14.459	0.166	0.383	2.16	-0.203	2.44
12/8/2012	1:47:00	14.630	14.458	0.172	0.397	2.16	-0.217	2.60
12/8/2012	2:02:00	14.627	14.454	0.173	0.399	2.16	-0.219	2.63
12/8/2012	2:17:00	14.626	14.459	0.167	0.385	2.16	-0.205	2.46
12/8/2012	2:32:00	14.624	14.461	0.163	0.376	2.16	-0.196	2.35
12/8/2012	2:47:00	14.626	14.454	0.172	0.397	2.16	-0.217	2.60
12/8/2012	3:02:00	14.627	14.459	0.168	0.388	2.16	-0.208	2.49
12/8/2012	3:17:00	14.625	14.454	0.171	0.394	2.16	-0.214	2.57
12/8/2012	3:32:00	14.621	14.452	0.169	0.390	2.16	-0.210	2.52
12/8/2012	3:47:00	14.622	14.459	0.163	0.376	2.16	-0.196	2.35
12/8/2012	4:02:00	14.621	14.456	0.165	0.381	2.16	-0.201	2.41
12/8/2012	4:17:00	14.617	14.458	0.159	0.367	2.16	-0.187	2.24
12/8/2012	4:32:00	14.622	14.459	0.163	0.376	2.16	-0.196	2.35
12/8/2012	4:47:00	14.621	14.464	0.157	0.362	2.16	-0.182	2.19
12/8/2012	5:02:00	14.624	14.469	0.155	0.358	2.16	-0.178	2.13
12/8/2012	5:17:00	14.621	14.467	0.154	0.355	2.16	-0.175	2.10
12/8/2012	5:32:00	14.623	14.468	0.155	0.358	2.16	-0.178	2.13
12/8/2012	5:47:00	14.624	14.463	0.161	0.371	2.16	-0.191	2.30
12/8/2012	6:02:00	14.629	14.469	0.160	0.369	2.16	-0.189	2.27
12/8/2012	6:17:00	14.631	14.467	0.164	0.378	2.16	-0.198	2.38
12/8/2012	6:32:00	14.633	14.466	0.167	0.385	2.16	-0.205	2.46
12/8/2012	6:47:00	14.627	14.469	0.158	0.365	2.16	-0.185	2.21
12/8/2012	7:02:00	14.635	14.477	0.158	0.365	2.16	-0.185	2.21
12/8/2012	7:17:00	14.629	14.481	0.148	0.341	2.16	-0.161	1.94
12/8/2012	7:32:00	14.634	14.479	0.155	0.358	2.16	-0.178	2.13
12/8/2012	7:47:00	14.634	14.477	0.157	0.362	2.16	-0.182	2.19
12/8/2012	8:02:00	14.638	14.484	0.154	0.355	2.16	-0.175	2.10
12/8/2012	8:17:00	14.639	14.481	0.158	0.365	2.16	-0.185	2.21
12/8/2012	8:32:00	14.645	14.484	0.161	0.371	2.16	-0.191	2.30
12/8/2012	8:47:00	14.642	14.488	0.154	0.355	2.16	-0.175	2.10
12/8/2012	9:02:00	14.645	14.488	0.157	0.362	2.16	-0.182	2.19
12/8/2012	9:17:00	14.650	14.486	0.164	0.378	2.16	-0.198	2.38
12/8/2012	9:32:00	14.646	14.486	0.160	0.369	2.16	-0.189	2.27
12/8/2012	9:47:00	14.647	14.486	0.161	0.371	2.16	-0.191	2.30
12/8/2012	10:02:00	14.648	14.486	0.162	0.374	2.16	-0.194	2.32
12/8/2012	10:17:00	14.648	14.482	0.166	0.383	2.16	-0.203	2.44
12/8/2012	10:32:00	14.650	14.478	0.172	0.397	2.16	-0.217	2.60
12/8/2012	10:47:00	14.649	14.475	0.174	0.401	2.16	-0.221	2.66
12/8/2012	11:02:00	14.653	14.468	0.185	0.427	2.16	-0.247	2.96
12/8/2012	11:17:00	14.647	14.464	0.183	0.422	2.16	-0.242	2.91
12/8/2012	11:32:00	14.643	14.465	0.178	0.411	2.16	-0.231	2.77
12/8/2012	11:47:00	14.636	14.466	0.170	0.392	2.16	-0.212	2.55
12/8/2012	12:02:00	14.638	14.457	0.181	0.418	2.16	-0.238	2.85
12/8/2012	12:17:00	14.630	14.462	0.168	0.388	2.16	-0.208	2.49
12/8/2012	12:32:00	14.625	14.452	0.173	0.399	2.16	-0.219	2.63
12/8/2012	12:47:00	14.628	14.452	0.176	0.406	2.16	-0.226	2.71
12/8/2012	13:02:00	14.627	14.451	0.176	0.406	2.16	-0.226	2.71
12/8/2012	13:17:00	14.623	14.454	0.169	0.390	2.16	-0.210	2.52
12/8/2012	13:32:00	14.619	14.458	0.161	0.371	2.16	-0.191	2.30
12/8/2012	13:47:00	14.620	14.455	0.165	0.381	2.16	-0.201	2.41
12/8/2012	14:02:00	14.620	14.454	0.166	0.383	2.16	-0.203	2.44
12/8/2012	14:17:00	14.618	14.457	0.161	0.371	2.16	-0.191	2.30
12/8/2012	14:32:00	14.616	14.459	0.157	0.362	2.16	-0.182	2.19
12/8/2012	14:47:00	14.624	14.456	0.168	0.388	2.16	-0.208	2.49
12/8/2012	15:02:00	14.621	14.454	0.167	0.385	2.16	-0.205	2.46
12/8/2012	15:17:00	14.622	14.457	0.165	0.381	2.16	-0.201	2.41
12/8/2012	15:32:00	14.625	14.461	0.164	0.378	2.16	-0.198	2.38
12/8/2012	15:47:00	14.623	14.459	0.164	0.378	2.16	-0.198	2.38
12/8/2012	16:02:00	14.618	14.458	0.160	0.369	2.16	-0.189	2.27
12/8/2012	16:17:00	14.623	14.461	0.162	0.374	2.16	-0.194	2.32
12/8/2012	16:32:00	14.618	14.461	0.157	0.362	2.16	-0.182	2.19
12/8/2012	16:47:00	14.618	14.467	0.151	0.348	2.16	-0.168	2.02
12/8/2012	17:02:00	14.628	14.464	0.164	0.378	2.16	-0.198	2.38
12/8/2012	17:17:00	14.628	14.467	0.161	0.371	2.16	-0.191	2.30
12/8/2012	17:32:00	14.627	14.466	0.161	0.371	2.16	-0.191	2.30
12/8/2012	17:47:00	14.624	14.468	0.156	0.360	2.16	-0.180	2.16
12/8/2012	18:02:00	14.631	14.466	0.165	0.381	2.16	-0.201	2.41
12/8/2012	18:17:00	14.632	14.473	0.159	0.367	2.16	-0.187	2.24
12/8/2012	18:32:00	14.636	14.469	0.167	0.385	2.16	-0.205	2.46
12/8/2012	18:47:00	14.633	14.469	0.164	0.378	2.16	-0.198	2.38
12/8/2012	19:02:00	14.636	14.469	0.167	0.385	2.16	-0.205	2.46
12/8/2012	19:17:00	14.636	14.472	0.164	0.378	2.16	-0.198	2.38
12/8/2012	19:32:00	14.633	14.474	0.159	0.367	2.16	-0.187	2.24
12/8/2012	19:47:00	14.630	14.475	0.155	0.358	2.16	-0.178	2.13
12/8/2012	20:02:00	14.638	14.475	0.163	0.376	2.16	-0.196	2.35
12/8/2012	20:17:00	14.638	14.479	0.159	0.367	2.16	-0.187	2.24
12/8/2012	20:32:00	14.634	14.472	0.162	0.374	2.16	-0.194	2.32
12/8/2012	20:47:00	14.636	14.477	0.159	0.367	2.16	-0.187	2.24
12/8/2012	21:02:00	14.637	14.478	0.159	0.367	2.16	-0.187	2.24
12/8/2012	21:17:00	14.639	14.476	0.163	0.376	2.16	-0.196	2.35
12/8/2012	21:32:00	14.639	14.481	0.158	0.365	2.16	-0.185	2.21
12/8/2012	21:47:00	14.634	14.481	0.153	0.353	2.16	-0.173	2.08
12/8/2012	22:02:00	14.640	14.483	0.157	0.362	2.16	-0.182	2.19
12/8/2012	22:17:00	14.639	14.485	0.154	0.355	2.16	-0.175	2.10
12/8/2012	22:32:00	14.637	14.488	0.149	0.344	2.16	-0.164	1.96
12/8/2012	22:47:00	14.642	14.493	0.149	0.344	2.16	-0.164	1.96
12/8/2012	23:02:00	14.643	14.487	0.156	0.360	2.16	-0.180	2.16
12/8/2012	23:17:00	14.648	14.485	0.163	0.376	2.16	-0.196	2.35
12/8/2012	23:32:00	14.647	14.483	0.164	0.378	2.16	-0.198	2.38
12/8/2012	23:47:00	14.652	14.486	0.166	0.383	2.16	-0.203	2.44
12/9/2012	0:02:00	14.655	14.486	0.169	0.390	2.16	-0.210	2.52
12/9/2012	0:17:00	14.655	14.488	0.167	0.385	2.16	-0.205	2.46
12/9/2012	0:32:00	14.656	14.486	0.170	0.392	2.16	-0.212	2.55
12/9/2012	0:47:00	14.654	14.483	0.171	0.394	2.16	-0.214	2.57
12/9/2012	1:02:00	14.650	14.492	0.158	0.365	2.16	-0.185	2.21
12/9/2012	1:17:00	14.649	14.488	0.161	0.371	2.16	-0.191	2.30
12/9/2012	1:32:00	14.652	14.491	0.161	0.371	2.16	-0.191	2.30
12/9/2012	1:47:00	14.656	14.491	0.165	0.381	2.16	-0.201	2.41
12/9/2012	2:02:00	14.654	14.494	0.160	0.369	2.16	-0.189	2.27
12/9/2012	2:17:00	14.652	14.493	0.159	0.367	2.16	-0.187	2.24
12/9/2012	2:32:00	14.652	14.488	0.164	0.378	2.16	-0.198	2.38
12/9/2012	2:47:00	14.656	14.491	0.165	0.381	2.16	-0.201	2.41
12/9/2012	3:02:00	14.653	14.489	0.164	0.378	2.16	-0.198	2.38
12/9/2012	3:17:00	14.651	14.489	0.162	0.374	2.16	-0.194	2.32

12/9/2012	3:32:00	14.657	14.493	0.164	0.378	2.16	-0.198	2.38		
12/9/2012	3:47:00	14.659	14.490	0.169	0.390	2.16	-0.210	2.52		
12/9/2012	4:02:00	14.655	14.489	0.166	0.383	2.16	-0.203	2.44		
12/9/2012	4:17:00	14.657	14.497	0.160	0.369	2.16	-0.189	2.27		
12/9/2012	4:32:00	14.654	14.499	0.155	0.358	2.16	-0.178	2.13		
12/9/2012	4:47:00	14.653	14.497	0.156	0.360	2.16	-0.180	2.16		
12/9/2012	5:02:00	14.655	14.500	0.155	0.358	2.16	-0.178	2.13		
12/9/2012	5:17:00	14.660	14.502	0.158	0.365	2.16	-0.185	2.21		
12/9/2012	5:32:00	14.663	14.500	0.163	0.376	2.16	-0.196	2.35		
12/9/2012	5:47:00	14.659	14.501	0.158	0.365	2.16	-0.185	2.21		
12/9/2012	6:02:00	14.664	14.505	0.159	0.367	2.16	-0.187	2.24		
12/9/2012	6:17:00	14.663	14.504	0.159	0.367	2.16	-0.187	2.24		
12/9/2012	6:32:00	14.667	14.505	0.162	0.374	2.16	-0.194	2.32		
12/9/2012	6:47:00	14.670	14.508	0.162	0.374	2.16	-0.194	2.32		
12/9/2012	7:02:00	14.675	14.512	0.163	0.376	2.16	-0.196	2.35		
12/9/2012	7:17:00	14.670	14.510	0.160	0.369	2.16	-0.189	2.27		
12/9/2012	7:32:00	14.676	14.517	0.159	0.367	2.16	-0.187	2.24		
12/9/2012	7:47:00	14.672	14.511	0.161	0.371	2.16	-0.191	2.30		
12/9/2012	8:02:00	14.674	14.515	0.159	0.367	2.16	-0.187	2.24		
12/9/2012	8:17:00	14.671	14.512	0.159	0.367	2.16	-0.187	2.24		
12/9/2012	8:32:00	14.677	14.517	0.160	0.369	2.16	-0.189	2.27		
12/9/2012	8:47:00	14.671	14.519	0.152	0.351	2.16	-0.171	2.05		
12/9/2012	9:02:00	14.678	14.513	0.165	0.381	2.16	-0.201	2.41		
12/9/2012	9:17:00	14.681	14.516	0.165	0.381	2.16	-0.201	2.41		
12/9/2012	9:32:00	14.679	14.513	0.166	0.383	2.16	-0.203	2.44		
12/9/2012	9:47:00	14.686	14.515	0.171	0.394	2.16	-0.214	2.57		
12/9/2012	10:02:00	14.683	14.504	0.179	0.413	2.16	-0.233	2.80		
12/9/2012	10:17:00	14.684	14.506	0.178	0.411	2.16	-0.231	2.77		
12/9/2012	10:32:00	14.678	14.501	0.177	0.408	2.16	-0.228	2.74		
12/9/2012	10:47:00	14.684	14.507	0.177	0.408	2.16	-0.228	2.74		
12/9/2012	11:02:00	14.680	14.493	0.187	0.431	2.16	-0.251	3.02		
12/9/2012	11:17:00	14.668	14.494	0.174	0.401	2.16	-0.221	2.66		
12/9/2012	11:32:00	14.672	14.491	0.181	0.418	2.16	-0.238	2.85		
12/9/2012	11:47:00	14.665	14.488	0.177	0.408	2.16	-0.228	2.74		
12/9/2012	12:02:00	14.664	14.485	0.179	0.413	2.16	-0.233	2.80		
12/9/2012	12:17:00	14.661	14.481	0.180	0.415	2.16	-0.235	2.82		
12/9/2012	12:32:00	14.655	14.481	0.174	0.401	2.16	-0.221	2.66		
12/9/2012	12:47:00	14.654	14.481	0.173	0.399	2.16	-0.219	2.63		
12/9/2012	13:02:00	14.650	14.477	0.173	0.399	2.16	-0.219	2.63		
12/9/2012	13:17:00	14.647	14.472	0.175	0.404	2.16	-0.224	2.68		
12/9/2012	13:32:00	14.644	14.473	0.171	0.394	2.16	-0.214	2.57		
12/9/2012	13:47:00	14.643	14.474	0.169	0.390	2.16	-0.210	2.52		
12/9/2012	14:02:00	14.644	14.477	0.167	0.385	2.16	-0.205	2.46		
12/9/2012	14:17:00	14.647	14.479	0.168	0.388	2.16	-0.208	2.49		
12/9/2012	14:32:00	14.645	14.478	0.167	0.385	2.16	-0.205	2.46		
12/9/2012	14:47:00	14.647	14.479	0.168	0.388	2.16	-0.208	2.49		
12/9/2012	15:02:00	14.641	14.476	0.165	0.381	2.16	-0.201	2.41		
12/9/2012	15:17:00	14.648	14.476	0.172	0.397	2.16	-0.217	2.60		
12/9/2012	15:32:00	14.645	14.473	0.172	0.397	2.16	-0.217	2.60		
12/9/2012	15:47:00	14.647	14.473	0.174	0.401	2.16	-0.221	2.66		
12/9/2012	16:02:00	14.641	14.474	0.167	0.385	2.16	-0.205	2.46		
12/9/2012	16:17:00	14.645	14.477	0.168	0.388	2.16	-0.208	2.49		
12/9/2012	16:32:00	14.646	14.478	0.168	0.388	2.16	-0.208	2.49		
12/9/2012	16:47:00	14.648	14.483	0.165	0.381	2.16	-0.201	2.41		
12/9/2012	17:02:00	14.647	14.476	0.171	0.394	2.16	-0.214	2.57		
12/9/2012	17:17:00	14.646	14.471	0.175	0.404	2.16	-0.224	2.68		
12/9/2012	17:32:00	14.644	14.472	0.172	0.397	2.16	-0.217	2.60		
12/9/2012	17:47:00	14.646	14.469	0.177	0.408	2.16	-0.228	2.74		
12/9/2012	18:02:00	14.654	14.473	0.181	0.418	2.16	-0.238	2.85		
12/9/2012	18:17:00	14.649	14.475	0.174	0.401	2.16	-0.221	2.66		
12/9/2012	18:32:00	14.647	14.478	0.169	0.390	2.16	-0.210	2.52		
12/9/2012	18:47:00	14.644	14.474	0.170	0.392	2.16	-0.212	2.55		
12/9/2012	19:02:00	14.646	14.476	0.170	0.392	2.16	-0.212	2.55		
12/9/2012	19:17:00	14.650	14.469	0.181	0.418	2.16	-0.238	2.85		
12/9/2012	19:32:00	14.642	14.471	0.171	0.394	2.16	-0.214	2.57		
12/9/2012	19:47:00	14.650	14.469	0.181	0.418	2.16	-0.238	2.85		
12/9/2012	20:02:00	14.645	14.469	0.176	0.406	2.16	-0.226	2.71		
12/9/2012	20:17:00	14.645	14.466	0.179	0.413	2.16	-0.233	2.80		
12/9/2012	20:32:00	14.642	14.458	0.184	0.424	2.16	-0.244	2.93		
12/9/2012	20:47:00	14.642	14.461	0.181	0.418	2.16	-0.238	2.85		
12/9/2012	21:02:00	14.636	14.459	0.177	0.408	2.16	-0.228	2.74		
12/9/2012	21:17:00	14.632	14.456	0.176	0.406	2.16	-0.226	2.71		
12/9/2012	21:32:00	14.630	14.454	0.176	0.406	2.16	-0.226	2.71		
12/9/2012	21:47:00	14.629	14.455	0.174	0.401	2.16	-0.221	2.66		
12/9/2012	22:02:00	14.626	14.448	0.178	0.411	2.16	-0.231	2.77		
12/9/2012	22:17:00	14.628	14.450	0.178	0.411	2.16	-0.231	2.77		
12/9/2012	22:32:00	14.630	14.447	0.183	0.422	2.16	-0.242	2.91		
12/9/2012	22:47:00	14.628	14.443	0.185	0.427	2.16	-0.247	2.96		
12/9/2012	23:02:00	14.622	14.445	0.177	0.408	2.16	-0.228	2.74		
12/9/2012	23:17:00	14.620	14.441	0.179	0.413	2.16	-0.233	2.80		
12/9/2012	23:32:00	14.620	14.439	0.181	0.418	2.16	-0.238	2.85		
12/9/2012	23:47:00	14.621	14.445	0.176	0.406	2.16	-0.226	2.71		
12/10/2012	0:02:00	14.611	14.436	0.175	0.404	2.16	-0.224	2.68		
12/10/2012	0:17:00	14.609	14.436	0.173	0.399	2.16	-0.219	2.63		
12/10/2012	0:32:00	14.610	14.428	0.182	0.420	2.16	-0.240	2.88		
12/10/2012	0:47:00	14.606	14.428	0.178	0.411	2.16	-0.231	2.77		
12/10/2012	1:02:00	14.604	14.424	0.180	0.415	2.16	-0.235	2.82		
12/10/2012	1:17:00	14.605	14.423	0.182	0.420	2.16	-0.240	2.88		
12/10/2012	1:32:00	14.596	14.423	0.173	0.399	2.16	-0.219	2.63		
12/10/2012	1:47:00	14.595	14.425	0.170	0.392	2.16	-0.212	2.55		
12/10/2012	2:02:00	14.595	14.419	0.176	0.406	2.16	-0.226	2.71		
12/10/2012	2:17:00	14.593	14.418	0.175	0.404	2.16	-0.224	2.68		
12/10/2012	2:32:00	14.593	14.413	0.180	0.415	2.16	-0.235	2.82		
12/10/2012	2:47:00	14.589	14.413	0.176	0.406	2.16	-0.226	2.71		
12/10/2012	3:02:00	14.589	14.410	0.179	0.413	2.16	-0.233	2.80		
12/10/2012	3:17:00	14.582	14.404	0.178	0.411	2.16	-0.231	2.77		
12/10/2012	3:32:00	14.583	14.406	0.177	0.408	2.16	-0.228	2.74		
12/10/2012	3:47:00	14.581	14.396	0.185	0.427	2.16	-0.247	2.96		
12/10/2012	4:02:00	14.577	14.401	0.176	0.406	2.16	-0.226	2.71		
12/10/2012	4:17:00	14.570	14.399	0.171	0.394	2.16	-0.214	2.57		
12/10/2012	4:32:00	14.575	14.397	0.178	0.411	2.16	-0.231	2.77		
12/10/2012	4:47:00	14.572	14.397	0.175	0.404	2.16	-0.224	2.68		
12/10/2012	5:02:00	14.567	14.394	0.173	0.399	2.16	-0.219	2.63		
12/10/2012	5:17:00	14.561	14.397	0.164	0.378	2.16	-0.198	2.38		
12/10/2012	5:32:00	14.560	14.392	0.168	0.388	2.16	-0.208	2.49		
12/10/2012	5:47:00	14.561	14.395	0.166	0.383	2.16	-0.203	2.44		
12/10/2012	6:02:00	14.564	14.393	0.171	0.394	2.16	-0.214	2.57		
12/10/2012	6:17:00	14.559	14.394	0.165	0.381	2.16	-0.201	2.41		
12/10/2012	6:32:00	14.563	14.393	0.170	0.392	2.16	-0.212	2.55		
12/10/2012	6:47:00	14.562	14.387	0.175	0.404	2.16	-0.224	2.68		
12/10/2012	7:02:00	14.561	14.391	0.170	0.392	2.16	-0.212	2.55		
12/10/2012	7:17:00	14.564	14.386	0.178	0.411	2.16	-0.231	2.77		
12/10/2012	7:32:00	14.563	14.393	0.170	0.392	2.16	-0.212	2.55		0.0
12/10/2012	7:47:00	14.558	14.389	0.169	0.390	2.16	-0.210	2.52		0.0
12/10/2012	8:02:00	14.555	14.390	0.165	0.381	2.16	-0.201	2.41		0.0
12/10/2012	8:17:00	14.553	14.392	0.161	0.371	2.16	-0.191	2.30		0.0
12/10/2012	8:32:00	14.555	14.393	0.162	0.374	2.16	-0.194	2.32		0.0
12/10/2012	8:47:00	14.554	14.386	0.168	0.388	2.16	-0.208	2.49		0.0
12/10/2012	9:02:00	14.557	14.393	0.164	0.378	2.16	-0.198	2.38		0.0
12/10/2012	9:17:00	14.561	14.391	0.170	0.392	2.16	-0.212	2.55		0.0
12/10/2012	9:32:00	14.558	14.387	0.171	0.394	2.16	-0.214	2.57		0.0
12/10/2012	9:47:00	14.565	14.381	0.184	0.424	2.16	-0.244	2.93		0.0
12/10/2012	10:02:00	14.560	14.378	0.182	0.420	2.16	-0.240	2.88		0.0
12/10/2012	10:17:00	14.564	14.377	0.187	0.431	2.16	-0.251	3.02		0.0
12/10/2012	10:32:00	14.558	14.373	0.185	0.427	2.16	-0.247	2.96		0.0
12/10/2012	10:47:00	14.555	14.372	0.183	0.422	2.16	-0.242	2.91		0.0
12/10/2012	11:02:00	14.553	14.364	0.189	0.436	2.16	-0.256	3.07		0.0
12/10/2012	11:17:00	14.541	14.361	0.180	0.415	2.16	-0.235	2.82		0.0
12/10/2012	11:32:00	14.543	14.359	0.184	0.424	2.16	-0.244	2.93		0.0
12/10/2012	11:47:00	14.544	14.355	0.189	0.436	2.16	-0.256	3.07		0.0
12/10/2012	12:02:00	14.543	14.348	0.195	0.450	2.16	-0.270	3.24		0.0
12/10/2012	12:17:00	14.537	14.346	0.191	0.441	2.16	-0.261	3.13		0.0
12/10/2012	12:32:00	14.528	14.344	0.184	0.424	2.16	-0.244	2.93		0.0

12/10/2012	12:47:00	14.527	14.342	0.185	0.427	2.16	-0.247	2.96		0.0
12/10/2012	13:02:00	14.524	14.333	0.191	0.441	2.16	-0.261	3.13		0.0
12/10/2012	13:17:00	14.520	14.334	0.186	0.429	2.16	-0.249	2.99		0.0
12/10/2012	13:32:00	14.513	14.335	0.178	0.411	2.16	-0.231	2.77		0.0
12/10/2012	13:47:00	14.516	14.336	0.180	0.415	2.16	-0.235	2.82		0.0
12/10/2012	14:02:00	14.509	14.333	0.176	0.406	2.16	-0.226	2.71		0.0
12/10/2012	14:17:00	14.504	14.323	0.181	0.418	2.16	-0.238	2.85		0.0
12/10/2012	14:32:00	14.509	14.332	0.177	0.408	2.16	-0.228	2.74		0.0
12/10/2012	14:47:00	14.513	14.326	0.187	0.431	2.16	-0.251	3.02		0.0
12/10/2012	15:02:00	14.502	14.329	0.173	0.399	2.16	-0.219	2.63		0.0
12/10/2012	15:17:00	14.504	14.331	0.173	0.399	2.16	-0.219	2.63		0.0
12/10/2012	15:32:00	14.506	14.320	0.186	0.429	2.16	-0.249	2.99		0.0
12/10/2012	15:47:00	14.497	14.325	0.172	0.397	2.16	-0.217	2.60		0.0
12/10/2012	16:02:00	14.499	14.337	0.162	0.374	2.16	-0.194	2.32		0.0
12/10/2012	16:17:00	14.495	14.331	0.164	0.378	2.16	-0.198	2.38		0.0
12/10/2012	16:32:00	14.498	14.336	0.162	0.374	2.16	-0.194	2.32		0.0
12/10/2012	16:47:00	14.494	14.350	0.144	0.332	2.16	-0.152	1.83		0.0
12/10/2012	17:02:00	14.502	14.349	0.153	0.353	2.16	-0.173	2.08		0.0
12/10/2012	17:17:00	14.499	14.343	0.156	0.360	2.16	-0.180	2.16		0.0
12/10/2012	17:32:00	14.502	14.334	0.168	0.388	2.16	-0.208	2.49		0.0
12/10/2012	17:47:00	14.500	14.335	0.165	0.381	2.16	-0.201	2.41		0.0
12/10/2012	18:02:00	14.507	14.345	0.162	0.374	2.16	-0.194	2.32		0.0
12/10/2012	18:17:00	14.511	14.338	0.173	0.399	2.16	-0.219	2.63		0.0
12/10/2012	18:32:00	14.519	14.341	0.178	0.411	2.16	-0.231	2.77		0.0
12/10/2012	18:47:00	14.503	14.337	0.166	0.383	2.16	-0.203	2.44		0.0
12/10/2012	19:02:00	14.506	14.340	0.166	0.383	2.16	-0.203	2.44		0.0
12/10/2012	19:17:00	14.514	14.334	0.180	0.415	2.16	-0.235	2.82		0.0
12/10/2012	19:32:00	14.510	14.334	0.176	0.406	2.16	-0.226	2.71		0.0
12/10/2012	19:47:00	14.504	14.335	0.169	0.390	2.16	-0.210	2.52		0.0
12/10/2012	20:02:00	14.506	14.336	0.170	0.392	2.16	-0.212	2.55		0.0
12/10/2012	20:17:00	14.505	14.333	0.172	0.397	2.16	-0.217	2.60		0.0
12/10/2012	20:32:00	14.501	14.331	0.170	0.392	2.16	-0.212	2.55		0.0
12/10/2012	20:47:00	14.504	14.325	0.179	0.413	2.16	-0.233	2.80		0.0
12/10/2012	21:02:00	14.492	14.322	0.170	0.392	2.16	-0.212	2.55		0.0
12/10/2012	21:17:00	14.506	14.330	0.176	0.406	2.16	-0.226	2.71		0.0
12/10/2012	21:32:00	14.499	14.330	0.169	0.390	2.16	-0.210	2.52		0.0
12/10/2012	21:47:00	14.497	14.332	0.165	0.381	2.16	-0.201	2.41		0.0
12/10/2012	22:02:00	14.492	14.338	0.154	0.355	2.16	-0.175	2.10		0.0
12/10/2012	22:17:00	14.495	14.335	0.160	0.369	2.16	-0.189	2.27		0.0
12/10/2012	22:32:00	14.496	14.338	0.158	0.365	2.16	-0.185	2.21		0.0
12/10/2012	22:47:00	14.505	14.330	0.175	0.404	2.16	-0.224	2.68		0.0
12/10/2012	23:02:00	14.507	14.335	0.172	0.397	2.16	-0.217	2.60		0.0
12/10/2012	23:17:00	14.505	14.342	0.163	0.376	2.16	-0.196	2.35		0.0
12/10/2012	23:32:00	14.505	14.333	0.172	0.397	2.16	-0.217	2.60		0.0
12/10/2012	23:47:00	14.503	14.332	0.171	0.394	2.16	-0.214	2.57		0.0
12/11/2012	0:02:00	14.505	14.334	0.171	0.394	2.16	-0.214	2.57		0.0
12/11/2012	0:17:00	14.502	14.330	0.172	0.397	2.16	-0.217	2.60		0.0
12/11/2012	0:32:00	14.503	14.336	0.167	0.385	2.16	-0.205	2.46		0.0
12/11/2012	0:47:00	14.500	14.334	0.166	0.383	2.16	-0.203	2.44		0.0
12/11/2012	1:02:00	14.501	14.343	0.158	0.365	2.16	-0.185	2.21		0.0
12/11/2012	1:17:00	14.501	14.348	0.153	0.353	2.16	-0.173	2.08		0.0
12/11/2012	1:32:00	14.499	14.346	0.153	0.353	2.16	-0.173	2.08		0.0
12/11/2012	1:47:00	14.501	14.347	0.154	0.355	2.16	-0.175	2.10		0.0
12/11/2012	2:02:00	14.509	14.347	0.162	0.374	2.16	-0.194	2.32		0.0
12/11/2012	2:17:00	14.515	14.346	0.169	0.390	2.16	-0.210	2.52		0.0
12/11/2012	2:32:00	14.517	14.346	0.171	0.394	2.16	-0.214	2.57		0.0
12/11/2012	2:47:00	14.518	14.352	0.166	0.383	2.16	-0.203	2.44		0.0
12/11/2012	3:02:00	14.520	14.357	0.163	0.376	2.16	-0.196	2.35		0.0
12/11/2012	3:17:00	14.521	14.360	0.161	0.371	2.16	-0.191	2.30		0.0
12/11/2012	3:32:00	14.524	14.358	0.166	0.383	2.16	-0.203	2.44		0.0
12/11/2012	3:47:00	14.526	14.366	0.160	0.369	2.16	-0.189	2.27		0.0
12/11/2012	4:02:00	14.521	14.360	0.161	0.371	2.16	-0.191	2.30		0.0
12/11/2012	4:17:00	14.520	14.365	0.155	0.358	2.16	-0.178	2.13		0.0
12/11/2012	4:32:00	14.527	14.368	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	4:47:00	14.529	14.372	0.157	0.362	2.16	-0.182	2.19		0.0
12/11/2012	5:02:00	14.530	14.374	0.156	0.360	2.16	-0.180	2.16		0.0
12/11/2012	5:17:00	14.535	14.376	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	5:32:00	14.539	14.375	0.164	0.378	2.16	-0.198	2.38		0.0
12/11/2012	5:47:00	14.537	14.371	0.166	0.383	2.16	-0.203	2.44		0.0
12/11/2012	6:02:00	14.540	14.379	0.161	0.371	2.16	-0.191	2.30		0.0
12/11/2012	6:17:00	14.545	14.386	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	6:32:00	14.543	14.392	0.151	0.348	2.16	-0.168	2.02		0.0
12/11/2012	6:47:00	14.549	14.396	0.153	0.353	2.16	-0.173	2.08		0.0
12/11/2012	7:02:00	14.552	14.397	0.155	0.358	2.16	-0.178	2.13		0.0
12/11/2012	7:17:00	14.553	14.402	0.151	0.348	2.16	-0.168	2.02		0.0
12/11/2012	7:32:00	14.555	14.403	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	7:47:00	14.560	14.403	0.157	0.362	2.16	-0.182	2.19		0.0
12/11/2012	8:02:00	14.562	14.404	0.158	0.365	2.16	-0.185	2.21		0.0
12/11/2012	8:17:00	14.567	14.412	0.155	0.358	2.16	-0.178	2.13		0.0
12/11/2012	8:32:00	14.572	14.418	0.154	0.355	2.16	-0.175	2.10		0.0
12/11/2012	8:47:00	14.572	14.423	0.149	0.344	2.16	-0.164	1.96		0.0
12/11/2012	9:02:00	14.571	14.424	0.147	0.339	2.16	-0.159	1.91		0.0
12/11/2012	9:17:00	14.573	14.431	0.142	0.328	2.16	-0.148	1.77		0.0
12/11/2012	9:32:00	14.581	14.429	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	9:47:00	14.588	14.429	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	10:02:00	14.590	14.424	0.166	0.383	2.16	-0.203	2.44		0.0
12/11/2012	10:17:00	14.594	14.423	0.171	0.394	2.16	-0.214	2.57		0.0
12/11/2012	10:32:00	14.596	14.419	0.177	0.408	2.16	-0.228	2.74		0.0
12/11/2012	10:47:00	14.597	14.420	0.177	0.408	2.16	-0.228	2.74		0.0
12/11/2012	11:02:00	14.594	14.421	0.173	0.399	2.16	-0.219	2.63		0.0
12/11/2012	11:17:00	14.599	14.428	0.171	0.394	2.16	-0.214	2.57		0.0
12/11/2012	11:32:00	14.590	14.417	0.173	0.399	2.16	-0.219	2.63		0.0
12/11/2012	11:47:00	14.590	14.417	0.173	0.399	2.16	-0.219	2.63		0.0
12/11/2012	12:02:00	14.591	14.422	0.169	0.390	2.16	-0.210	2.52		0.0
12/11/2012	12:17:00	14.591	14.418	0.173	0.399	2.16	-0.219	2.63		0.0
12/11/2012	12:32:00	14.594	14.423	0.171	0.394	2.16	-0.214	2.57		0.0
12/11/2012	12:47:00	14.588	14.430	0.158	0.365	2.16	-0.185	2.21		0.0
12/11/2012	13:02:00	14.591	14.426	0.165	0.381	2.16	-0.201	2.41		0.0
12/11/2012	13:17:00	14.583	14.429	0.154	0.355	2.16	-0.175	2.10		0.0
12/11/2012	13:32:00	14.580	14.429	0.151	0.348	2.16	-0.168	2.02		0.0
12/11/2012	13:47:00	14.597	14.432	0.165	0.381	2.16	-0.201	2.41		0.0
12/11/2012	14:02:00	14.603	14.426	0.177	0.408	2.16	-0.228	2.74		0.0
12/11/2012	14:17:00	14.605	14.425	0.180	0.415	2.16	-0.235	2.82		0.0
12/11/2012	14:32:00	14.596	14.432	0.164	0.378	2.16	-0.198	2.38		0.0
12/11/2012	14:47:00	14.593	14.441	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	15:02:00	14.587	14.449	0.138	0.318	2.16	-0.138	1.66		0.0
12/11/2012	15:17:00	14.597	14.445	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	15:32:00	14.598	14.451	0.147	0.339	2.16	-0.159	1.91		0.0
12/11/2012	15:47:00	14.613	14.454	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	16:02:00	14.613	14.451	0.162	0.374	2.16	-0.194	2.32		0.0
12/11/2012	16:17:00	14.615	14.463	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	16:32:00	14.616	14.462	0.154	0.355	2.16	-0.175	2.10		0.0
12/11/2012	16:47:00	14.618	14.459	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	17:02:00	14.627	14.468	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	17:17:00	14.625	14.470	0.155	0.358	2.16	-0.178	2.13		0.0
12/11/2012	17:32:00	14.628	14.475	0.153	0.353	2.16	-0.173	2.08		0.0
12/11/2012	17:47:00	14.625	14.473	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	18:02:00	14.630	14.474	0.156	0.360	2.16	-0.180	2.16		0.0
12/11/2012	18:17:00	14.635	14.482	0.153	0.353	2.16	-0.173	2.08		0.0
12/11/2012	18:32:00	14.636	14.488	0.148	0.341	2.16	-0.161	1.94		0.0
12/11/2012	18:47:00	14.638	14.492	0.146	0.337	2.16	-0.157	1.88		0.0
12/11/2012	19:02:00	14.647	14.481	0.166	0.383	2.16	-0.203	2.44		0.0
12/11/2012	19:17:00	14.643	14.487	0.156	0.360	2.16	-0.180	2.16		0.0
12/11/2012	19:32:00	14.650	14.488	0.162	0.374	2.16	-0.194	2.32		0.0
12/11/2012	19:47:00	14.647	14.493	0.154	0.355	2.16	-0.175	2.10		0.0
12/11/2012	20:02:00	14.653	14.494	0.159	0.367	2.16	-0.187	2.24		0.0
12/11/2012	20:17:00	14.647	14.504	0.143	0.330	2.16	-0.150	1.80		0.0
12/11/2012	20:32:00	14.654	14.502	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	20:47:00	14.658	14.498	0.160	0.369	2.16	-0.189	2.27		0.0
12/11/2012	21:02:00	14.656	14.498	0.158	0.365	2.16	-0.185	2.21		0.0
12/11/2012	21:17:00	14.663	14.496	0.167	0.385	2.16	-0.205	2.46		0.0
12/11/2012	21:32:00	14.663	14.506	0.157	0.362	2.16	-0.182	2.19		0.0
12/11/2012	21:47:00	14.668	14.497	0.171	0.394	2.16	-0.214	2.57		0.0

12/11/2012	22:02:00	14.666	14.510	0.156	0.360	2.16	-0.180	2.16		0.0
12/11/2012	22:17:00	14.670	14.518	0.152	0.351	2.16	-0.171	2.05		0.0
12/11/2012	22:32:00	14.668	14.520	0.148	0.341	2.16	-0.161	1.94		0.0
12/11/2012	22:47:00	14.670	14.520	0.150	0.346	2.16	-0.166	1.99		0.0
12/11/2012	23:02:00	14.671	14.525	0.146	0.337	2.16	-0.157	1.88		0.0
12/11/2012	23:17:00	14.683	14.508	0.175	0.404	2.16	-0.224	2.68		0.0
12/11/2012	23:32:00	14.679	14.513	0.166	0.383	2.16	-0.203	2.44		0.0
12/11/2012	23:47:00	14.685	14.511	0.174	0.401	2.16	-0.221	2.66		0.0
12/12/2012	0:02:00	14.685	14.509	0.176	0.406	2.16	-0.226	2.71		0.0
12/12/2012	0:17:00	14.687	14.519	0.168	0.388	2.16	-0.208	2.49		0.0
12/12/2012	0:32:00	14.681	14.519	0.162	0.374	2.16	-0.194	2.32		0.0
12/12/2012	0:47:00	14.681	14.525	0.156	0.360	2.16	-0.180	2.16		0.0
12/12/2012	1:02:00	14.679	14.529	0.150	0.346	2.16	-0.166	1.99		0.0
12/12/2012	1:17:00	14.684	14.527	0.157	0.362	2.16	-0.182	2.19		0.0
12/12/2012	1:32:00	14.688	14.526	0.162	0.374	2.16	-0.194	2.32		0.0
12/12/2012	1:47:00	14.690	14.527	0.163	0.376	2.16	-0.196	2.35		0.0
12/12/2012	2:02:00	14.690	14.523	0.167	0.385	2.16	-0.205	2.46		0.0
12/12/2012	2:17:00	14.691	14.527	0.164	0.378	2.16	-0.198	2.38		0.0
12/12/2012	2:32:00	14.690	14.528	0.162	0.374	2.16	-0.194	2.32		0.0
12/12/2012	2:47:00	14.688	14.534	0.154	0.355	2.16	-0.175	2.10		0.0
12/12/2012	3:02:00	14.691	14.535	0.156	0.360	2.16	-0.180	2.16		0.0
12/12/2012	3:17:00	14.689	14.537	0.152	0.351	2.16	-0.171	2.05		0.0
12/12/2012	3:32:00	14.695	14.532	0.163	0.376	2.16	-0.196	2.35		0.0
12/12/2012	3:47:00	14.691	14.537	0.154	0.355	2.16	-0.175	2.10		0.0
12/12/2012	4:02:00	14.697	14.541	0.156	0.360	2.16	-0.180	2.16		0.0
12/12/2012	4:17:00	14.699	14.541	0.158	0.365	2.16	-0.185	2.21		0.0
12/12/2012	4:32:00	14.696	14.546	0.150	0.346	2.16	-0.166	1.99		0.0
12/12/2012	4:47:00	14.698	14.546	0.152	0.351	2.16	-0.171	2.05		0.0
12/12/2012	5:02:00	14.700	14.542	0.158	0.365	2.16	-0.185	2.21		0.0
12/12/2012	5:17:00	14.701	14.545	0.156	0.360	2.16	-0.180	2.16		0.0
12/12/2012	5:32:00	14.706	14.548	0.158	0.365	2.16	-0.185	2.21		0.0
12/12/2012	5:47:00	14.712	14.546	0.166	0.383	2.16	-0.203	2.44		0.0
12/12/2012	6:02:00	14.708	14.550	0.158	0.365	2.16	-0.185	2.21		0.0
12/12/2012	6:17:00	14.709	14.551	0.158	0.365	2.16	-0.185	2.21		0.0
12/12/2012	6:32:00	14.703	14.556	0.147	0.339	2.16	-0.159	1.91		0.0
12/12/2012	6:47:00	14.702	14.569	0.133	0.307	2.16	-0.127	1.52		0.0
12/12/2012	7:02:00	14.711	14.567	0.144	0.332	2.16	-0.152	1.83		0.0
12/12/2012	7:17:00	14.710	14.566	0.144	0.332	2.16	-0.152	1.83		0.0
12/12/2012	7:32:00	14.716	14.569	0.147	0.339	2.16	-0.159	1.91		0.0
12/12/2012	7:47:00	14.717	14.568	0.149	0.344	2.16	-0.164	1.96		0.0
12/12/2012	8:02:00	14.726	14.566	0.160	0.369	2.16	-0.189	2.27		0.0
12/12/2012	8:17:00	14.725	14.570	0.155	0.358	2.16	-0.178	2.13		0.0
12/12/2012	8:32:00	14.728	14.571	0.157	0.362	2.16	-0.182	2.19		0.0
12/12/2012	8:47:00	14.729	14.576	0.153	0.353	2.16	-0.173	2.08		0.0
12/12/2012	9:02:00	14.736	14.573	0.163	0.376	2.16	-0.196	2.35		0.0
12/12/2012	9:17:00	14.734	14.571	0.163	0.376	2.16	-0.196	2.35		0.0
12/12/2012	9:32:00	14.733	14.583	0.150	0.346	2.16	-0.166	1.99		0.0
12/12/2012	9:47:00	14.736	14.580	0.156	0.360	2.16	-0.180	2.16		0.0
12/12/2012	10:02:00	14.730	14.578	0.152	0.351	2.16	-0.171	2.05		0.0
12/12/2012	10:17:00	14.738	14.575	0.163	0.376	2.16	-0.196	2.35		0.0
12/12/2012	10:32:00	14.739	14.578	0.161	0.371	2.16	-0.191	2.30		0.0
12/12/2012	10:47:00	14.739	14.579	0.160	0.369	2.16	-0.189	2.27		0.0
12/12/2012	11:02:00	14.737	14.571	0.166	0.383	2.16	-0.203	2.44		0.0
12/12/2012	11:17:00	14.732	14.580	0.152	0.351	2.16	-0.171	2.05		0.0
12/12/2012	11:32:00	14.740	14.564	0.176	0.406	2.16	-0.226	2.71		0.0
12/12/2012	11:47:00	14.744	14.572	0.172	0.397	2.16	-0.217	2.60		0.0
12/12/2012	12:02:00	14.735	14.574	0.161	0.371	2.16	-0.191	2.30		0.0
12/12/2012	12:17:00	14.734	14.573	0.161	0.371	2.16	-0.191	2.30		0.0
12/12/2012	12:32:00	14.735	14.565	0.170	0.392	2.16	-0.212	2.55		0.0
12/12/2012	12:47:00	14.728	14.561	0.167	0.385	2.16	-0.205	2.46		0.0
12/12/2012	13:02:00	14.728	14.561	0.167	0.385	2.16	-0.205	2.46		0.0
12/12/2012	13:17:00	14.734	14.562	0.172	0.397	2.16	-0.217	2.60		0.0
12/12/2012	13:32:00	14.725	14.570	0.155	0.358	2.16	-0.178	2.13		0.0
12/12/2012	13:47:00	14.722	14.562	0.160	0.369	2.16	-0.189	2.27		0.0
12/12/2012	14:02:00	14.725	14.569	0.156	0.360	2.16	-0.180	2.16		0.0
12/12/2012	14:17:00	14.722	14.576	0.146	0.337	2.16	-0.157	1.88		0.0
12/12/2012	14:32:00	14.723	14.564	0.159	0.367	2.16	-0.187	2.24		0.0
12/12/2012	14:47:00	14.726	14.575	0.151	0.348	2.16	-0.168	2.02		0.0
12/12/2012	15:02:00	14.722	14.582	0.140	0.323	2.16	-0.143	1.72		0.0
12/12/2012	15:17:00	14.742	14.583	0.159	0.367	2.16	-0.187	2.24		0.0
12/12/2012	15:32:00	14.736	14.577	0.159	0.367	2.16	-0.187	2.24		0.0
12/12/2012	15:47:00	14.736	14.568	0.168	0.388	2.16	-0.208	2.49		0.0
12/12/2012	16:02:00	14.748	14.570	0.178	0.411	2.16	-0.231	2.77		0.0
12/12/2012	16:17:00	14.752	14.579	0.173	0.399	2.16	-0.219	2.63		0.0
12/12/2012	16:32:00	14.747	14.573	0.174	0.401	2.16	-0.221	2.66		0.0
12/12/2012	16:47:00	14.753	14.575	0.178	0.411	2.16	-0.231	2.77		0.0
12/12/2012	17:02:00	14.745	14.583	0.162	0.374	2.16	-0.194	2.32		0.0
12/12/2012	17:17:00	14.754	14.588	0.166	0.383	2.16	-0.203	2.44		0.0
12/12/2012	17:32:00	14.745	14.593	0.152	0.351	2.16	-0.171	2.05		0.0
12/12/2012	17:47:00	14.752	14.593	0.159	0.367	2.16	-0.187	2.24		0.0
12/12/2012	18:02:00	14.760	14.590	0.170	0.392	2.16	-0.212	2.55		0.0
12/12/2012	18:17:00	14.757	14.597	0.160	0.369	2.16	-0.189	2.27		0.0
12/12/2012	18:32:00	14.760	14.582	0.178	0.411	2.16	-0.231	2.77		0.0
12/12/2012	18:47:00	14.761	14.575	0.186	0.429	2.16	-0.249	2.99		0.0
12/12/2012	19:02:00	14.762	14.579	0.183	0.422	2.16	-0.242	2.91		0.0
12/12/2012	19:17:00	14.774	14.587	0.187	0.431	2.16	-0.251	3.02		0.0
12/12/2012	19:32:00	14.774	14.588	0.186	0.429	2.16	-0.249	2.99		0.0
12/12/2012	19:47:00	14.753	14.586	0.167	0.385	2.16	-0.205	2.46		0.0
12/12/2012	20:02:00	14.757	14.584	0.173	0.399	2.16	-0.219	2.63		0.0
12/12/2012	20:17:00	14.767	14.585	0.182	0.420	2.16	-0.240	2.88		0.0
12/12/2012	20:32:00	14.775	14.584	0.191	0.441	2.16	-0.261	3.13		0.0
12/12/2012	20:47:00	14.773	14.583	0.190	0.438	2.16	-0.258	3.10		0.0
12/12/2012	21:02:00	14.770	14.583	0.187	0.431	2.16	-0.251	3.02		0.0
12/12/2012	21:17:00	14.774	14.583	0.191	0.441	2.16	-0.261	3.13		0.0
12/12/2012	21:32:00	14.774	14.585	0.189	0.436	2.16	-0.256	3.07		0.0
12/12/2012	21:47:00	14.774	14.582	0.192	0.443	2.16	-0.263	3.16		0.0
12/12/2012	22:02:00	14.778	14.578	0.200	0.461	2.16	-0.281	3.38		0.0
12/12/2012	22:17:00	14.775	14.591	0.184	0.424	2.16	-0.244	2.93		0.0
12/12/2012	22:32:00	14.771	14.594	0.177	0.408	2.16	-0.228	2.74		0.0
12/12/2012	22:47:00	14.767	14.591	0.176	0.406	2.16	-0.226	2.71		0.0
12/12/2012	23:02:00	14.762	14.594	0.168	0.388	2.16	-0.208	2.49		0.0
12/12/2012	23:17:00	14.766	14.602	0.164	0.378	2.16	-0.198	2.38		0.0
12/12/2012	23:32:00	14.768	14.601	0.167	0.385	2.16	-0.205	2.46		0.0
12/12/2012	23:47:00	14.768	14.606	0.162	0.374	2.16	-0.194	2.32		0.0
12/13/2012	0:02:00	14.763	14.603	0.160	0.369	2.16	-0.189	2.27		0.0
12/13/2012	0:17:00	14.773	14.602	0.171	0.394	2.16	-0.214	2.57		0.0
12/13/2012	0:32:00	14.773	14.597	0.176	0.406	2.16	-0.226	2.71		0.0
12/13/2012	0:47:00	14.777	14.587	0.190	0.438	2.16	-0.258	3.10		0.0
12/13/2012	1:02:00	14.779	14.585	0.194	0.448	2.16	-0.268	3.21		0.0
12/13/2012	1:17:00	14.778	14.579	0.199	0.459	2.16	-0.279	3.35		0.0
12/13/2012	1:32:00	14.773	14.567	0.206	0.475	2.16	-0.295	3.54		0.0
12/13/2012	1:47:00	14.781	14.569	0.212	0.489	2.16	-0.309	3.71		0.0
12/13/2012	2:02:00	14.788	14.570	0.218	0.503	2.16	-0.323	3.88		0.0
12/13/2012	2:17:00	14.800	14.568	0.232	0.535	2.16	-0.355	4.26		0.0
12/13/2012	2:32:00	14.809	14.584	0.225	0.519	2.16	-0.339	4.07		0.0
12/13/2012	2:47:00	14.796	14.579	0.217	0.501	2.16	-0.321	3.85		0.0
12/13/2012	3:02:00	14.798	14.586	0.212	0.489	2.16	-0.309	3.71		0.0
12/13/2012	3:17:00	14.792	14.587	0.205	0.473	2.16	-0.293	3.52		0.0
12/13/2012	3:32:00	14.776	14.594	0.182	0.420	2.16	-0.240	2.88		0.0
12/13/2012	3:47:00	14.785	14.600	0.185	0.427	2.16	-0.247	2.96		0.0
12/13/2012	4:02:00	14.788	14.597	0.191	0.441	2.16	-0.261	3.13		0.0
12/13/2012	4:17:00	14.787	14.601	0.186	0.429	2.16	-0.249	2.99		0.0
12/13/2012	4:32:00	14.780	14.597	0.183	0.422	2.16	-0.242	2.91		0.0
12/13/2012	4:47:00	14.786	14.602	0.184	0.424	2.16	-0.244	2.93		0.0
12/13/2012	5:02:00	14.796	14.610	0.186	0.429	2.16	-0.249	2.99		0.0
12/13/2012	5:17:00	14.798	14.603	0.195	0.450	2.16	-0.270	3.24		0.0
12/13/2012	5:32:00	14.794	14.612	0.182	0.420	2.16	-0.240	2.88		0.0
12/13/2012	5:47:00	14.788	14.611	0.177	0.408	2.16	-0.228	2.74		0.0
12/13/2012	6:02:00	14.787	14.620	0.167	0.385	2.16	-0.205	2.46		0.0
12/13/2012	6:17:00	14.791	14.619	0.172	0.397	2.16	-0.217	2.60		0.0
12/13/2012	6:32:00	14.792	14.623	0.169	0.390	2.16	-0.210	2.52		0.0
12/13/2012	6:47:00	14.791	14.624	0.167	0.385	2.16	-0.205	2.46		0.0
12/13/2012	7:02:00	14.792	14.624	0.168	0.388	2.16	-0.208	2.49		0.0

12/13/2012	7:17:00	14.795	14.632	0.163	0.376	2.16	-0.196	2.35		0.0
12/13/2012	7:32:00	14.790	14.628	0.162	0.374	2.16	-0.194	2.32		0.0
12/13/2012	7:47:00	14.791	14.631	0.160	0.369	2.16	-0.189	2.27		0.0
12/13/2012	8:02:00	14.790	14.635	0.155	0.358	2.16	-0.178	2.13		0.0
12/13/2012	8:17:00	14.791	14.635	0.156	0.360	2.16	-0.180	2.16		0.0
12/13/2012	8:32:00	14.793	14.639	0.154	0.355	2.16	-0.175	2.10		0.0
12/13/2012	8:47:00	14.796	14.636	0.160	0.369	2.16	-0.189	2.27		0.0
12/13/2012	9:02:00	14.795	14.642	0.153	0.353	2.16	-0.173	2.08		0.0
12/13/2012	9:17:00	14.799	14.637	0.162	0.374	2.16	-0.194	2.32		0.0
12/13/2012	9:32:00	14.796	14.636	0.160	0.369	2.16	-0.189	2.27		0.0
12/13/2012	9:47:00	14.796	14.638	0.158	0.365	2.16	-0.185	2.21		0.0
12/13/2012	10:02:00	14.791	14.640	0.151	0.348	2.16	-0.168	2.02		0.0
12/13/2012	10:17:00	14.797	14.635	0.162	0.374	2.16	-0.194	2.32		0.0
12/13/2012	10:32:00	14.798	14.636	0.162	0.374	2.16	-0.194	2.32		0.0
12/13/2012	10:47:00	14.793	14.630	0.163	0.376	2.16	-0.196	2.35		0.0
12/13/2012	11:02:00	14.794	14.624	0.170	0.392	2.16	-0.212	2.55		0.0
12/13/2012	11:17:00	14.795	14.622	0.173	0.399	2.16	-0.219	2.63		0.0
12/13/2012	11:32:00	14.790	14.619	0.171	0.394	2.16	-0.214	2.57		0.0
12/13/2012	11:47:00	14.788	14.620	0.168	0.388	2.16	-0.208	2.49		0.0
12/13/2012	12:02:00	14.787	14.615	0.172	0.397	2.16	-0.217	2.60		0.0
12/13/2012	12:17:00	14.783	14.610	0.173	0.399	2.16	-0.219	2.63		0.0
12/13/2012	12:32:00	14.780	14.612	0.168	0.388	2.16	-0.208	2.49		0.0
12/13/2012	12:47:00	14.773	14.606	0.167	0.385	2.16	-0.205	2.46		0.0
12/13/2012	13:02:00	14.767	14.612	0.155	0.358	2.16	-0.178	2.13		0.0
12/13/2012	13:17:00	14.769	14.602	0.167	0.385	2.16	-0.205	2.46		0.0
12/13/2012	13:32:00	14.766	14.603	0.163	0.376	2.16	-0.196	2.35		0.0
12/13/2012	13:47:00	14.764	14.604	0.160	0.369	2.16	-0.189	2.27		0.0
12/13/2012	14:02:00	14.764	14.604	0.160	0.369	2.16	-0.189	2.27		0.0
12/13/2012	14:17:00	14.757	14.606	0.151	0.348	2.16	-0.168	2.02		0.0
12/13/2012	14:32:00	14.757	14.603	0.154	0.355	2.16	-0.175	2.10		0.0
12/13/2012	14:47:00	14.760	14.603	0.157	0.362	2.16	-0.182	2.19		0.0
12/13/2012	15:02:00	14.756	14.603	0.153	0.353	2.16	-0.173	2.08		0.0
12/13/2012	15:17:00	14.753	14.603	0.150	0.346	2.16	-0.166	1.99		0.0
12/13/2012	15:32:00	14.758	14.602	0.156	0.360	2.16	-0.180	2.16		0.0
12/13/2012	15:47:00	14.758	14.614	0.144	0.332	2.16	-0.152	1.83		0.0
12/13/2012	16:02:00	14.750	14.618	0.132	0.305	2.16	-0.125	1.49		0.0
12/13/2012	16:17:00	14.750	14.608	0.142	0.328	2.16	-0.148	1.77		0.0
12/13/2012	16:32:00	14.755	14.608	0.147	0.339	2.16	-0.159	1.91		0.0
12/13/2012	16:47:00	14.750	14.610	0.140	0.323	2.16	-0.143	1.72		0.0
12/13/2012	17:02:00	14.754	14.613	0.141	0.325	2.16	-0.145	1.74		0.0
12/13/2012	17:17:00	14.759	14.613	0.146	0.337	2.16	-0.157	1.88		0.0
12/13/2012	17:32:00	14.759	14.616	0.143	0.330	2.16	-0.150	1.80		0.0
12/13/2012	17:47:00	14.759	14.618	0.141	0.325	2.16	-0.145	1.74		0.0
12/13/2012	18:02:00	14.756	14.621	0.135	0.311	2.16	-0.131	1.58		0.0
12/13/2012	18:17:00	14.762	14.623	0.139	0.321	2.16	-0.141	1.69		0.0
12/13/2012	18:32:00	14.763	14.623	0.140	0.323	2.16	-0.143	1.72		0.0
12/13/2012	18:47:00	14.760	14.624	0.136	0.314	2.16	-0.134	1.61		0.0
12/13/2012	19:02:00	14.764	14.622	0.142	0.328	2.16	-0.148	1.77		0.0
12/13/2012	19:17:00	14.769	14.626	0.143	0.330	2.16	-0.150	1.80		0.0
12/13/2012	19:32:00	14.768	14.620	0.148	0.341	2.16	-0.161	1.94		0.0
12/13/2012	19:47:00	14.767	14.619	0.148	0.341	2.16	-0.161	1.94		0.0
12/13/2012	20:02:00	14.768	14.625	0.143	0.330	2.16	-0.150	1.80		0.0
12/13/2012	20:17:00	14.767	14.620	0.147	0.339	2.16	-0.159	1.91		0.0
12/13/2012	20:32:00	14.763	14.623	0.140	0.323	2.16	-0.143	1.72		0.0
12/13/2012	20:47:00	14.764	14.625	0.139	0.321	2.16	-0.141	1.69		0.0
12/13/2012	21:02:00	14.764	14.632	0.132	0.305	2.16	-0.125	1.49		0.0
12/13/2012	21:17:00	14.765	14.634	0.131	0.302	2.16	-0.122	1.47		0.0
12/13/2012	21:32:00	14.763	14.627	0.136	0.314	2.16	-0.134	1.61		0.0
12/13/2012	21:47:00	14.765	14.632	0.133	0.307	2.16	-0.127	1.52		0.0
12/13/2012	22:02:00	14.765	14.638	0.127	0.293	2.16	-0.113	1.36		0.0
12/13/2012	22:17:00	14.773	14.636	0.137	0.316	2.16	-0.136	1.63		0.0
12/13/2012	22:32:00	14.768	14.629	0.139	0.321	2.16	-0.141	1.69		0.0
12/13/2012	22:47:00	14.774	14.631	0.143	0.330	2.16	-0.150	1.80		0.0
12/13/2012	23:02:00	14.776	14.628	0.148	0.341	2.16	-0.161	1.94		0.0
12/13/2012	23:17:00	14.773	14.624	0.149	0.344	2.16	-0.164	1.96		0.0
12/13/2012	23:32:00	14.773	14.626	0.147	0.339	2.16	-0.159	1.91		0.0
12/13/2012	23:47:00	14.771	14.628	0.143	0.330	2.16	-0.150	1.80		0.0
12/14/2012	0:02:00	14.771	14.623	0.148	0.341	2.16	-0.161	1.94		0.0
12/14/2012	0:17:00	14.767	14.630	0.137	0.316	2.16	-0.136	1.63		0.0
12/14/2012	0:32:00	14.763	14.626	0.137	0.316	2.16	-0.136	1.63		0.0
12/14/2012	0:47:00	14.761	14.626	0.135	0.311	2.16	-0.131	1.58		0.0
12/14/2012	1:02:00	14.764	14.624	0.140	0.323	2.16	-0.143	1.72		0.0
12/14/2012	1:17:00	14.769	14.622	0.147	0.339	2.16	-0.159	1.91		0.0
12/14/2012	1:32:00	14.768	14.625	0.143	0.330	2.16	-0.150	1.80		0.0
12/14/2012	1:47:00	14.768	14.626	0.142	0.328	2.16	-0.148	1.77		0.0
12/14/2012	2:02:00	14.766	14.624	0.142	0.328	2.16	-0.148	1.77		0.0
12/14/2012	2:17:00	14.764	14.619	0.145	0.335	2.16	-0.155	1.85		0.0
12/14/2012	2:32:00	14.767	14.620	0.147	0.339	2.16	-0.159	1.91		0.0
12/14/2012	2:47:00	14.764	14.624	0.140	0.323	2.16	-0.143	1.72		0.0
12/14/2012	3:02:00	14.767	14.627	0.140	0.323	2.16	-0.143	1.72		0.0
12/14/2012	3:17:00	14.760	14.623	0.137	0.316	2.16	-0.136	1.63		0.0
12/14/2012	3:32:00	14.758	14.624	0.134	0.309	2.16	-0.129	1.55		0.0
12/14/2012	3:47:00	14.762	14.622	0.140	0.323	2.16	-0.143	1.72		0.0
12/14/2012	4:02:00	14.759	14.624	0.135	0.311	2.16	-0.131	1.58		0.0
12/14/2012	4:17:00	14.766	14.627	0.139	0.321	2.16	-0.141	1.69		0.0
12/14/2012	4:32:00	14.761	14.627	0.134	0.309	2.16	-0.129	1.55		0.0
12/14/2012	4:47:00	14.761	14.626	0.135	0.311	2.16	-0.131	1.58		0.0
12/14/2012	5:02:00	14.765	14.632	0.133	0.307	2.16	-0.127	1.52		0.0
12/14/2012	5:17:00	14.764	14.639	0.125	0.288	2.16	-0.108	1.30		
12/14/2012	5:32:00	14.761	14.643	0.118	0.272	2.16	-0.092	1.11		
12/14/2012	5:47:00	14.763	14.640	0.123	0.284	2.16	-0.104	1.25		
12/14/2012	6:02:00	14.767	14.641	0.126	0.291	2.16	-0.111	1.33		
12/14/2012	6:17:00	14.773	14.641	0.132	0.305	2.16	-0.125	1.49		
12/14/2012	6:32:00	14.780	14.633	0.147	0.339	2.16	-0.159	1.91		
12/14/2012	6:47:00	14.781	14.634	0.147	0.339	2.16	-0.159	1.91		
12/14/2012	7:02:00	14.783	14.634	0.149	0.344	2.16	-0.164	1.96		
12/14/2012	7:17:00	14.780	14.637	0.143	0.330	2.16	-0.150	1.80		
12/14/2012	7:32:00	14.777	14.632	0.145	0.335	2.16	-0.155	1.85		
12/14/2012	7:47:00	14.772	14.637	0.135	0.311	2.16	-0.131	1.58		
12/14/2012	8:02:00	14.773	14.643	0.130	0.300	2.16	-0.120	1.44		
12/14/2012	8:17:00	14.774	14.642	0.132	0.305	2.16	-0.125	1.49		
12/14/2012	8:32:00	14.778	14.643	0.135	0.311	2.16	-0.131	1.58		
12/14/2012	8:47:00	14.777	14.647	0.130	0.300	2.16	-0.120	1.44		
12/14/2012	9:02:00	14.782	14.647	0.135	0.311	2.16	-0.131	1.58		
12/14/2012	9:17:00	14.784	14.644	0.140	0.323	2.16	-0.143	1.72		
12/14/2012	9:32:00	14.785	14.644	0.141	0.325	2.16	-0.145	1.74		
12/14/2012	9:47:00	14.792	14.635	0.157	0.362	2.16	-0.182	2.19		
12/14/2012	10:02:00	14.789	14.635	0.154	0.355	2.16	-0.175	2.10		
12/14/2012	10:17:00	14.788	14.644	0.144	0.332	2.16	-0.152	1.83		
12/14/2012	10:32:00	14.791	14.631	0.160	0.369	2.16	-0.189	2.27		
12/14/2012	10:47:00	14.785	14.625	0.160	0.369	2.16	-0.189	2.27		
12/14/2012	11:02:00	14.790	14.621	0.169	0.390	2.16	-0.210	2.52		
12/14/2012	11:17:00	14.787	14.616	0.171	0.394	2.16	-0.214	2.57		
12/14/2012	11:32:00	14.780	14.606	0.174	0.401	2.16	-0.221	2.66		
12/14/2012	11:47:00	14.780	14.605	0.175	0.404	2.16	-0.224	2.68		
12/14/2012	12:02:00	14.766	14.605	0.161	0.371	2.16	-0.191	2.30		
12/14/2012	12:17:00	14.765	14.596	0.169	0.390	2.16	-0.210	2.52		
12/14/2012	12:32:00	14.756	14.596	0.160	0.369	2.16	-0.189	2.27		
12/14/2012	12:47:00	14.753	14.594	0.159	0.367	2.16	-0.187	2.24		
12/14/2012	13:02:00	14.764	14.586	0.178	0.411	2.16	-0.231	2.77		
12/14/2012	13:17:00	14.757	14.581	0.176	0.406	2.16	-0.226	2.71		
12/14/2012	13:32:00	14.755	14.578	0.177	0.408	2.16	-0.228	2.74		
12/14/2012	13:47:00	14.746	14.575	0.171	0.394	2.16	-0.214	2.57		
12/14/2012	14:02:00	14.753	14.577	0.176	0.406	2.16	-0.226	2.71		
12/14/2012	14:17:00	14.740	14.572	0.168	0.388	2.16	-0.208	2.49		
12/14/2012	14:32:00	14.738	14.573	0.165	0.381	2.16	-0.201	2.41		
12/14/2012	14:47:00	14.736	14.572	0.164	0.378	2.16	-0.198	2.38		
12/14/2012	15:02:00	14.732	14.569	0.163	0.376	2.16	-0.196	2.35		
12/14/2012	15:17:00	14.733	14.567	0.166	0.383	2.16	-0.203	2.44		
12/14/2012	15:32:00	14.728	14.573	0.155	0.358	2.16	-0.178	2.13		
12/14/2012	15:47:00	14.729	14.568	0.161	0.371	2.16	-0.191	2.30		
12/14/2012	16:02:00	14.730	14.573	0.157	0.362	2.16	-0.182	2.19		
12/14/2012	16:17:00	14.724	14.568	0.156	0.360	2.16	-0.180	2.16		

12/14/2012	16:32:00	14.722	14.586	0.136	0.314	2.16	-0.134	1.61
12/14/2012	16:47:00	14.723	14.577	0.146	0.337	2.16	-0.157	1.88
12/14/2012	17:02:00	14.726	14.580	0.146	0.337	2.16	-0.157	1.88
12/14/2012	17:17:00	14.730	14.582	0.148	0.341	2.16	-0.161	1.94
12/14/2012	17:32:00	14.728	14.578	0.150	0.346	2.16	-0.166	1.99
12/14/2012	17:47:00	14.734	14.579	0.155	0.358	2.16	-0.178	2.13
12/14/2012	18:02:00	14.737	14.577	0.160	0.369	2.16	-0.189	2.27
12/14/2012	18:17:00	14.733	14.579	0.154	0.355	2.16	-0.175	2.10
12/14/2012	18:32:00	14.729	14.585	0.144	0.332	2.16	-0.152	1.83
12/14/2012	18:47:00	14.734	14.581	0.153	0.353	2.16	-0.173	2.08
12/14/2012	19:02:00	14.733	14.585	0.148	0.341	2.16	-0.161	1.94
12/14/2012	19:17:00	14.732	14.583	0.149	0.344	2.16	-0.164	1.96
12/14/2012	19:32:00	14.732	14.578	0.154	0.355	2.16	-0.175	2.10
12/14/2012	19:47:00	14.733	14.575	0.158	0.365	2.16	-0.185	2.21
12/14/2012	20:02:00	14.732	14.580	0.152	0.351	2.16	-0.171	2.05
12/14/2012	20:17:00	14.734	14.584	0.150	0.346	2.16	-0.166	1.99
12/14/2012	20:32:00	14.731	14.584	0.147	0.339	2.16	-0.159	1.91
12/14/2012	20:47:00	14.730	14.584	0.146	0.337	2.16	-0.157	1.88
12/14/2012	21:02:00	14.730	14.588	0.142	0.328	2.16	-0.148	1.77
12/14/2012	21:17:00	14.730	14.586	0.144	0.332	2.16	-0.152	1.83
12/14/2012	21:32:00	14.732	14.585	0.147	0.339	2.16	-0.159	1.91
12/14/2012	21:47:00	14.729	14.585	0.144	0.332	2.16	-0.152	1.83
12/14/2012	22:02:00	14.731	14.589	0.142	0.328	2.16	-0.148	1.77
12/14/2012	22:17:00	14.735	14.585	0.150	0.346	2.16	-0.166	1.99
12/14/2012	22:32:00	14.731	14.580	0.151	0.348	2.16	-0.168	2.02
12/14/2012	22:47:00	14.732	14.579	0.153	0.353	2.16	-0.173	2.08
12/14/2012	23:02:00	14.732	14.579	0.153	0.353	2.16	-0.173	2.08
12/14/2012	23:17:00	14.738	14.580	0.158	0.365	2.16	-0.185	2.21
12/14/2012	23:32:00	14.737	14.575	0.162	0.374	2.16	-0.194	2.32
12/14/2012	23:47:00	14.730	14.584	0.146	0.337	2.16	-0.157	1.88
12/15/2012	0:02:00	14.734	14.589	0.146	0.337	2.16	-0.157	1.88
12/15/2012	0:17:00	14.731	14.585	0.146	0.337	2.16	-0.157	1.88
12/15/2012	0:32:00	14.729	14.581	0.148	0.341	2.16	-0.161	1.94
12/15/2012	0:47:00	14.725	14.575	0.150	0.346	2.16	-0.166	1.99
12/15/2012	1:02:00	14.733	14.575	0.158	0.365	2.16	-0.185	2.21
12/15/2012	1:17:00	14.733	14.577	0.156	0.360	2.16	-0.180	2.16
12/15/2012	1:32:00	14.737	14.572	0.165	0.381	2.16	-0.201	2.41
12/15/2012	1:47:00	14.734	14.574	0.160	0.369	2.16	-0.189	2.27
12/15/2012	2:02:00	14.724	14.573	0.151	0.348	2.16	-0.168	2.02
12/15/2012	2:17:00	14.721	14.560	0.161	0.371	2.16	-0.191	2.30
12/15/2012	2:32:00	14.721	14.561	0.160	0.369	2.16	-0.189	2.27
12/15/2012	2:47:00	14.720	14.562	0.158	0.365	2.16	-0.185	2.21
12/15/2012	3:02:00	14.723	14.556	0.167	0.385	2.16	-0.205	2.46
12/15/2012	3:17:00	14.715	14.558	0.157	0.362	2.16	-0.182	2.19
12/15/2012	3:32:00	14.705	14.564	0.141	0.325	2.16	-0.145	1.74
12/15/2012	3:47:00	14.712	14.561	0.151	0.348	2.16	-0.168	2.02
12/15/2012	4:02:00	14.709	14.563	0.146	0.337	2.16	-0.157	1.88
12/15/2012	4:17:00	14.709	14.560	0.149	0.344	2.16	-0.164	1.96
12/15/2012	4:32:00	14.713	14.563	0.150	0.346	2.16	-0.166	1.99
12/15/2012	4:47:00	14.711	14.567	0.144	0.332	2.16	-0.152	1.83
12/15/2012	5:02:00	14.711	14.567	0.144	0.332	2.16	-0.152	1.83
12/15/2012	5:17:00	14.709	14.572	0.137	0.316	2.16	-0.136	1.63
12/15/2012	5:32:00	14.712	14.579	0.133	0.307	2.16	-0.127	1.52
12/15/2012	5:47:00	14.720	14.579	0.141	0.325	2.16	-0.145	1.74
12/15/2012	6:02:00	14.718	14.578	0.140	0.323	2.16	-0.143	1.72
12/15/2012	6:17:00	14.719	14.577	0.142	0.328	2.16	-0.148	1.77
12/15/2012	6:32:00	14.730	14.577	0.153	0.353	2.16	-0.173	2.08
12/15/2012	6:47:00	14.731	14.570	0.161	0.371	2.16	-0.191	2.30
12/15/2012	7:02:00	14.733	14.574	0.159	0.367	2.16	-0.187	2.24
12/15/2012	7:17:00	14.733	14.574	0.159	0.367	2.16	-0.187	2.24
12/15/2012	7:32:00	14.723	14.576	0.147	0.339	2.16	-0.159	1.91
12/15/2012	7:47:00	14.722	14.575	0.147	0.339	2.16	-0.159	1.91
12/15/2012	8:02:00	14.721	14.585	0.136	0.314	2.16	-0.134	1.61
12/15/2012	8:17:00	14.726	14.582	0.144	0.332	2.16	-0.152	1.83
12/15/2012	8:32:00	14.730	14.583	0.147	0.339	2.16	-0.159	1.91
12/15/2012	8:47:00	14.731	14.583	0.148	0.341	2.16	-0.161	1.94
12/15/2012	9:02:00	14.732	14.582	0.150	0.346	2.16	-0.166	1.99
12/15/2012	9:17:00	14.736	14.578	0.158	0.365	2.16	-0.185	2.21
12/15/2012	9:32:00	14.739	14.580	0.159	0.367	2.16	-0.187	2.24
12/15/2012	9:47:00	14.736	14.578	0.158	0.365	2.16	-0.185	2.21
12/15/2012	10:02:00	14.735	14.573	0.162	0.374	2.16	-0.194	2.32
12/15/2012	10:17:00	14.735	14.578	0.157	0.362	2.16	-0.182	2.19
12/15/2012	10:32:00	14.736	14.567	0.169	0.390	2.16	-0.210	2.52
12/15/2012	10:47:00	14.731	14.563	0.168	0.388	2.16	-0.208	2.49
12/15/2012	11:02:00	14.730	14.555	0.175	0.404	2.16	-0.224	2.68
12/15/2012	11:17:00	14.727	14.559	0.168	0.388	2.16	-0.208	2.49
12/15/2012	11:32:00	14.729	14.549	0.180	0.415	2.16	-0.235	2.82
12/15/2012	11:47:00	14.717	14.548	0.169	0.390	2.16	-0.210	2.52
12/15/2012	12:02:00	14.718	14.545	0.173	0.399	2.16	-0.219	2.63
12/15/2012	12:17:00	14.715	14.541	0.174	0.401	2.16	-0.221	2.66
12/15/2012	12:32:00	14.700	14.538	0.162	0.374	2.16	-0.194	2.32
12/15/2012	12:47:00	14.703	14.538	0.165	0.381	2.16	-0.201	2.41
12/15/2012	13:02:00	14.703	14.529	0.174	0.401	2.16	-0.221	2.66
12/15/2012	13:17:00	14.703	14.529	0.174	0.401	2.16	-0.221	2.66
12/15/2012	13:32:00	14.696	14.533	0.163	0.376	2.16	-0.196	2.35
12/15/2012	13:47:00	14.690	14.527	0.163	0.376	2.16	-0.196	2.35
12/15/2012	14:02:00	14.686	14.526	0.160	0.369	2.16	-0.189	2.27
12/15/2012	14:17:00	14.683	14.530	0.153	0.353	2.16	-0.173	2.08
12/15/2012	14:32:00	14.688	14.523	0.165	0.381	2.16	-0.201	2.41
12/15/2012	14:47:00	14.687	14.526	0.161	0.371	2.16	-0.191	2.30
12/15/2012	15:02:00	14.682	14.529	0.153	0.353	2.16	-0.173	2.08
12/15/2012	15:17:00	14.682	14.516	0.166	0.383	2.16	-0.203	2.44
12/15/2012	15:32:00	14.684	14.525	0.159	0.367	2.16	-0.187	2.24
12/15/2012	15:47:00	14.683	14.522	0.161	0.371	2.16	-0.191	2.30
12/15/2012	16:02:00	14.683	14.522	0.161	0.371	2.16	-0.191	2.30
12/15/2012	16:17:00	14.682	14.514	0.168	0.388	2.16	-0.208	2.49
12/15/2012	16:32:00	14.681	14.523	0.158	0.365	2.16	-0.185	2.21
12/15/2012	16:47:00	14.681	14.516	0.165	0.381	2.16	-0.201	2.41
12/15/2012	17:02:00	14.677	14.517	0.160	0.369	2.16	-0.189	2.27
12/15/2012	17:17:00	14.678	14.516	0.162	0.374	2.16	-0.194	2.32
12/15/2012	17:32:00	14.679	14.518	0.161	0.371	2.16	-0.191	2.30
12/15/2012	17:47:00	14.672	14.522	0.150	0.346	2.16	-0.166	1.99
12/15/2012	18:02:00	14.674	14.517	0.157	0.362	2.16	-0.182	2.19
12/15/2012	18:17:00	14.672	14.521	0.151	0.348	2.16	-0.168	2.02
12/15/2012	18:32:00	14.669	14.518	0.151	0.348	2.16	-0.168	2.02
12/15/2012	18:47:00	14.675	14.513	0.162	0.374	2.16	-0.194	2.32
12/15/2012	19:02:00	14.672	14.516	0.156	0.360	2.16	-0.180	2.16
12/15/2012	19:17:00	14.673	14.521	0.152	0.351	2.16	-0.171	2.05
12/15/2012	19:32:00	14.680	14.512	0.168	0.388	2.16	-0.208	2.49
12/15/2012	19:47:00	14.675	14.518	0.157	0.362	2.16	-0.182	2.19
12/15/2012	20:02:00	14.668	14.518	0.150	0.346	2.16	-0.166	1.99
12/15/2012	20:17:00	14.674	14.521	0.153	0.353	2.16	-0.173	2.08
12/15/2012	20:32:00	14.678	14.509	0.169	0.390	2.16	-0.210	2.52
12/15/2012	20:47:00	14.669	14.513	0.156	0.360	2.16	-0.180	2.16
12/15/2012	21:02:00	14.676	14.513	0.163	0.376	2.16	-0.196	2.35
12/15/2012	21:17:00	14.669	14.504	0.165	0.381	2.16	-0.201	2.41
12/15/2012	21:32:00	14.671	14.501	0.170	0.392	2.16	-0.212	2.55
12/15/2012	21:47:00	14.667	14.505	0.162	0.374	2.16	-0.194	2.32
12/15/2012	22:02:00	14.669	14.499	0.170	0.392	2.16	-0.212	2.55
12/15/2012	22:17:00	14.665	14.496	0.169	0.390	2.16	-0.210	2.52
12/15/2012	22:32:00	14.667	14.504	0.163	0.376	2.16	-0.196	2.35
12/15/2012	22:47:00	14.659	14.493	0.166	0.383	2.16	-0.203	2.44
12/15/2012	23:02:00	14.655	14.495	0.160	0.369	2.16	-0.189	2.27
12/15/2012	23:17:00	14.658	14.494	0.164	0.378	2.16	-0.198	2.38
12/15/2012	23:32:00	14.652	14.493	0.159	0.367	2.16	-0.187	2.24
12/15/2012	23:47:00	14.654	14.486	0.168	0.388	2.16	-0.208	2.49
12/16/2012	0:02:00	14.655	14.490	0.165	0.381	2.16	-0.201	2.41
12/16/2012	0:17:00	14.655	14.489	0.166	0.383	2.16	-0.203	2.44
12/16/2012	0:32:00	14.648	14.477	0.171	0.394	2.16	-0.214	2.57
12/16/2012	0:47:00	14.646	14.482	0.164	0.378	2.16	-0.198	2.38
12/16/2012	1:02:00	14.643	14.482	0.161	0.371	2.16	-0.191	2.30
12/16/2012	1:17:00	14.645	14.481	0.164	0.378	2.16	-0.198	2.38
12/16/2012	1:32:00	14.636	14.478	0.158	0.365	2.16	-0.185	2.21

12/16/2012	1:47:00	14.633	14.475	0.158	0.365	2.16	-0.185	2.21
12/16/2012	2:02:00	14.635	14.481	0.154	0.355	2.16	-0.175	2.10
12/16/2012	2:17:00	14.640	14.481	0.159	0.367	2.16	-0.187	2.24
12/16/2012	2:32:00	14.640	14.487	0.153	0.353	2.16	-0.173	2.08
12/16/2012	2:47:00	14.638	14.487	0.151	0.348	2.16	-0.168	2.02
12/16/2012	3:02:00	14.640	14.481	0.159	0.367	2.16	-0.187	2.24
12/16/2012	3:17:00	14.639	14.476	0.163	0.376	2.16	-0.196	2.35
12/16/2012	3:32:00	14.643	14.486	0.157	0.362	2.16	-0.182	2.19
12/16/2012	3:47:00	14.643	14.486	0.157	0.362	2.16	-0.182	2.19
12/16/2012	4:02:00	14.637	14.479	0.158	0.365	2.16	-0.185	2.21
12/16/2012	4:17:00	14.638	14.480	0.158	0.365	2.16	-0.185	2.21
12/16/2012	4:32:00	14.634	14.480	0.154	0.355	2.16	-0.175	2.10
12/16/2012	4:47:00	14.638	14.481	0.157	0.362	2.16	-0.182	2.19
12/16/2012	5:02:00	14.638	14.485	0.153	0.353	2.16	-0.173	2.08
12/16/2012	5:17:00	14.639	14.482	0.157	0.362	2.16	-0.182	2.19
12/16/2012	5:32:00	14.638	14.484	0.154	0.355	2.16	-0.175	2.10
12/16/2012	5:47:00	14.643	14.479	0.164	0.378	2.16	-0.198	2.38
12/16/2012	6:02:00	14.645	14.482	0.163	0.376	2.16	-0.196	2.35
12/16/2012	6:17:00	14.639	14.486	0.153	0.353	2.16	-0.173	2.08
12/16/2012	6:32:00	14.641	14.490	0.151	0.348	2.16	-0.168	2.02
12/16/2012	6:47:00	14.637	14.488	0.149	0.344	2.16	-0.164	1.96
12/16/2012	7:02:00	14.637	14.489	0.148	0.341	2.16	-0.161	1.94
12/16/2012	7:17:00	14.638	14.489	0.149	0.344	2.16	-0.164	1.96
12/16/2012	7:32:00	14.648	14.487	0.161	0.371	2.16	-0.191	2.30
12/16/2012	7:47:00	14.646	14.484	0.162	0.374	2.16	-0.194	2.32
12/16/2012	8:02:00	14.642	14.484	0.158	0.365	2.16	-0.185	2.21
12/16/2012	8:17:00	14.644	14.486	0.158	0.365	2.16	-0.185	2.21
12/16/2012	8:32:00	14.643	14.488	0.155	0.358	2.16	-0.178	2.13
12/16/2012	8:47:00	14.639	14.494	0.145	0.335	2.16	-0.155	1.85
12/16/2012	9:02:00	14.646	14.487	0.159	0.367	2.16	-0.187	2.24
12/16/2012	9:17:00	14.648	14.491	0.157	0.362	2.16	-0.182	2.19
12/16/2012	9:32:00	14.642	14.495	0.147	0.339	2.16	-0.159	1.91
12/16/2012	9:47:00	14.646	14.490	0.156	0.360	2.16	-0.180	2.16
12/16/2012	10:02:00	14.649	14.479	0.170	0.392	2.16	-0.212	2.55
12/16/2012	10:17:00	14.647	14.475	0.172	0.397	2.16	-0.217	2.60
12/16/2012	10:32:00	14.643	14.477	0.166	0.383	2.16	-0.203	2.44
12/16/2012	10:47:00	14.645	14.472	0.173	0.399	2.16	-0.219	2.63
12/16/2012	11:02:00	14.650	14.474	0.176	0.406	2.16	-0.226	2.71
12/16/2012	11:17:00	14.636	14.467	0.169	0.390	2.16	-0.210	2.52
12/16/2012	11:32:00	14.634	14.462	0.172	0.397	2.16	-0.217	2.60
12/16/2012	11:47:00	14.630	14.461	0.169	0.390	2.16	-0.210	2.52
12/16/2012	12:02:00	14.629	14.454	0.175	0.404	2.16	-0.224	2.68
12/16/2012	12:17:00	14.630	14.461	0.169	0.390	2.16	-0.210	2.52
12/16/2012	12:32:00	14.628	14.453	0.175	0.404	2.16	-0.224	2.68
12/16/2012	12:47:00	14.618	14.451	0.167	0.385	2.16	-0.205	2.46
12/16/2012	13:02:00	14.613	14.455	0.158	0.365	2.16	-0.185	2.21
12/16/2012	13:17:00	14.619	14.451	0.168	0.388	2.16	-0.208	2.49
12/16/2012	13:32:00	14.614	14.445	0.169	0.390	2.16	-0.210	2.52
12/16/2012	13:47:00	14.605	14.442	0.163	0.376	2.16	-0.196	2.35
12/16/2012	14:02:00	14.605	14.439	0.166	0.383	2.16	-0.203	2.44
12/16/2012	14:17:00	14.611	14.436	0.175	0.404	2.16	-0.224	2.68
12/16/2012	14:32:00	14.607	14.442	0.165	0.381	2.16	-0.201	2.41
12/16/2012	14:47:00	14.603	14.443	0.160	0.369	2.16	-0.189	2.27
12/16/2012	15:02:00	14.599	14.442	0.157	0.362	2.16	-0.182	2.19
12/16/2012	15:17:00	14.595	14.440	0.155	0.358	2.16	-0.178	2.13
12/16/2012	15:32:00	14.602	14.441	0.161	0.371	2.16	-0.191	2.30
12/16/2012	15:47:00	14.602	14.439	0.163	0.376	2.16	-0.196	2.35
12/16/2012	16:02:00	14.602	14.436	0.166	0.383	2.16	-0.203	2.44
12/16/2012	16:17:00	14.601	14.434	0.167	0.385	2.16	-0.205	2.46
12/16/2012	16:32:00	14.600	14.435	0.165	0.381	2.16	-0.201	2.41
12/16/2012	16:47:00	14.601	14.432	0.169	0.390	2.16	-0.210	2.52
12/16/2012	17:02:00	14.593	14.434	0.159	0.367	2.16	-0.187	2.24
12/16/2012	17:17:00	14.596	14.434	0.162	0.374	2.16	-0.194	2.32
12/16/2012	17:32:00	14.591	14.429	0.162	0.374	2.16	-0.194	2.32
12/16/2012	17:47:00	14.594	14.427	0.167	0.385	2.16	-0.205	2.46
12/16/2012	18:02:00	14.597	14.429	0.168	0.388	2.16	-0.208	2.49
12/16/2012	18:17:00	14.597	14.428	0.169	0.390	2.16	-0.210	2.52
12/16/2012	18:32:00	14.596	14.428	0.168	0.388	2.16	-0.208	2.49
12/16/2012	18:47:00	14.591	14.426	0.165	0.381	2.16	-0.201	2.41
12/16/2012	19:02:00	14.591	14.423	0.168	0.388	2.16	-0.208	2.49
12/16/2012	19:17:00	14.591	14.423	0.168	0.388	2.16	-0.208	2.49
12/16/2012	19:32:00	14.590	14.422	0.168	0.388	2.16	-0.208	2.49
12/16/2012	19:47:00	14.595	14.420	0.175	0.404	2.16	-0.224	2.68
12/16/2012	20:02:00	14.588	14.424	0.164	0.378	2.16	-0.198	2.38
12/16/2012	20:17:00	14.587	14.422	0.165	0.381	2.16	-0.201	2.41
12/16/2012	20:32:00	14.587	14.422	0.165	0.381	2.16	-0.201	2.41
12/16/2012	20:47:00	14.584	14.423	0.161	0.371	2.16	-0.191	2.30
12/16/2012	21:02:00	14.581	14.422	0.159	0.367	2.16	-0.187	2.24
12/16/2012	21:17:00	14.584	14.420	0.164	0.378	2.16	-0.198	2.38
12/16/2012	21:32:00	14.586	14.411	0.175	0.404	2.16	-0.224	2.68
12/16/2012	21:47:00	14.587	14.416	0.171	0.394	2.16	-0.214	2.57
12/16/2012	22:02:00	14.587	14.415	0.172	0.397	2.16	-0.217	2.60
12/16/2012	22:17:00	14.583	14.411	0.172	0.397	2.16	-0.217	2.60
12/16/2012	22:32:00	14.583	14.410	0.173	0.399	2.16	-0.219	2.63
12/16/2012	22:47:00	14.578	14.410	0.168	0.388	2.16	-0.208	2.49
12/16/2012	23:02:00	14.585	14.410	0.175	0.404	2.16	-0.224	2.68
12/16/2012	23:17:00	14.576	14.411	0.165	0.381	2.16	-0.201	2.41
12/16/2012	23:32:00	14.581	14.403	0.178	0.411	2.16	-0.231	2.77
12/16/2012	23:47:00	14.586	14.406	0.180	0.415	2.16	-0.235	2.82
12/17/2012	0:02:00	14.598	14.403	0.195	0.450	2.16	-0.270	3.24
12/17/2012	0:17:00	14.619	14.406	0.213	0.491	2.16	-0.311	3.74
12/17/2012	0:32:00	14.648	14.399	0.249	0.574	2.16	-0.394	4.73
12/17/2012	0:47:00	14.692	14.395	0.297	0.685	2.16	-0.505	6.06
12/17/2012	1:02:00	14.742	14.399	0.343	0.791	2.16	-0.611	7.34
12/17/2012	1:17:00	14.806	14.396	0.410	0.946	2.16	-0.766	9.19
12/17/2012	1:32:00	14.893	14.400	0.493	1.137	2.16	-0.957	11.49
12/17/2012	1:47:00	14.942	14.388	0.554	1.278	2.16	-1.098	13.18
12/17/2012	2:02:00	14.965	14.388	0.577	1.331	2.16	-1.151	13.81
12/17/2012	2:17:00	14.965	14.385	0.580	1.338	2.16	-1.158	13.90
12/17/2012	2:32:00	14.941	14.382	0.559	1.290	2.16	-1.110	13.32
12/17/2012	2:47:00	14.913	14.369	0.544	1.255	2.16	-1.075	12.90
12/17/2012	3:02:00	14.871	14.367	0.504	1.163	2.16	-0.983	11.79
12/17/2012	3:17:00	14.838	14.353	0.485	1.119	2.16	-0.939	11.27
12/17/2012	3:32:00	14.805	14.344	0.461	1.064	2.16	-0.884	10.60
12/17/2012	3:47:00	14.764	14.345	0.419	0.967	2.16	-0.787	9.44
12/17/2012	4:02:00	14.728	14.347	0.381	0.879	2.16	-0.699	8.39
12/17/2012	4:17:00	14.697	14.352	0.345	0.796	2.16	-0.616	7.39
12/17/2012	4:32:00	14.670	14.354	0.316	0.729	2.16	-0.549	6.59
12/17/2012	4:47:00	14.642	14.380	0.262	0.604	2.16	-0.424	5.09
12/17/2012	5:02:00	14.635	14.379	0.256	0.591	2.16	-0.411	4.93
12/17/2012	5:17:00	14.624	14.378	0.246	0.568	2.16	-0.388	4.65
12/17/2012	5:32:00	14.627	14.373	0.254	0.586	2.16	-0.406	4.87
12/17/2012	5:47:00	14.634	14.378	0.256	0.591	2.16	-0.411	4.93
12/17/2012	6:02:00	14.630	14.395	0.235	0.542	2.16	-0.362	4.35
12/17/2012	6:17:00	14.620	14.391	0.229	0.528	2.16	-0.348	4.18
12/17/2012	6:32:00	14.615	14.390	0.225	0.519	2.16	-0.339	4.07
12/17/2012	6:47:00	14.614	14.386	0.228	0.526	2.16	-0.346	4.15
12/17/2012	7:02:00	14.611	14.388	0.223	0.514	2.16	-0.334	4.01
12/17/2012	7:17:00	14.624	14.387	0.237	0.547	2.16	-0.367	4.40
12/17/2012	7:32:00	14.622	14.391	0.231	0.533	2.16	-0.353	4.24
12/17/2012	7:47:00	14.612	14.389	0.223	0.514	2.16	-0.334	4.01
12/17/2012	8:02:00	14.612	14.387	0.225	0.519	2.16	-0.339	4.07
12/17/2012	8:17:00	14.611	14.391	0.220	0.508	2.16	-0.328	3.93
12/17/2012	8:32:00	14.608	14.397	0.211	0.487	2.16	-0.307	3.68
12/17/2012	8:47:00	14.606	14.397	0.209	0.482	2.16	-0.302	3.63
12/17/2012	9:02:00	14.598	14.396	0.202	0.466	2.16	-0.286	3.43
12/17/2012	9:17:00	14.605	14.392	0.213	0.491	2.16	-0.311	3.74
12/17/2012	9:32:00	14.602	14.394	0.208	0.480	2.16	-0.300	3.60
12/17/2012	9:47:00	14.609	14.393	0.216	0.498	2.16	-0.318	3.82
12/17/2012	10:02:00	14.598	14.384	0.214	0.494	2.16	-0.314	3.76
12/17/2012	10:17:00	14.598	14.384	0.214	0.494	2.16	-0.314	3.76
12/17/2012	10:32:00	14.598	14.383	0.215	0.496	2.16	-0.316	3.79
12/17/2012	10:47:00	14.591	14.373	0.218	0.503	2.16	-0.323	3.88

12/17/2012	11:02:00	14.588	14.367	0.221	0.510	2.16	-0.330	3.96
12/17/2012	11:17:00	14.578	14.362	0.216	0.498	2.16	-0.318	3.82
12/17/2012	11:32:00	14.579	14.363	0.216	0.498	2.16	-0.318	3.82
12/17/2012	11:47:00	14.575	14.359	0.216	0.498	2.16	-0.318	3.82
12/17/2012	12:02:00	14.556	14.359	0.197	0.454	2.16	-0.274	3.29
12/17/2012	12:17:00	14.557	14.352	0.205	0.473	2.16	-0.293	3.52
12/17/2012	12:32:00	14.552	14.360	0.192	0.443	2.16	-0.263	3.16
12/17/2012	12:47:00	14.551	14.355	0.196	0.452	2.16	-0.272	3.27
12/17/2012	13:02:00	14.554	14.357	0.197	0.454	2.16	-0.274	3.29
12/17/2012	13:17:00	14.549	14.360	0.189	0.436	2.16	-0.256	3.07
12/17/2012	13:32:00	14.547	14.353	0.194	0.448	2.16	-0.268	3.21
12/17/2012	13:47:00	14.553	14.351	0.202	0.466	2.16	-0.286	3.43
12/17/2012	14:02:00	14.546	14.342	0.204	0.471	2.16	-0.291	3.49
12/17/2012	14:17:00	14.554	14.339	0.215	0.496	2.16	-0.316	3.79
12/17/2012	14:32:00	14.547	14.340	0.207	0.478	2.16	-0.298	3.57
12/17/2012	14:47:00	14.546	14.335	0.211	0.487	2.16	-0.307	3.68
12/17/2012	15:02:00	14.558	14.326	0.232	0.535	2.16	-0.355	4.26
12/17/2012	15:17:00	14.564	14.330	0.234	0.540	2.16	-0.360	4.32
12/17/2012	15:32:00	14.577	14.323	0.254	0.586	2.16	-0.406	4.87
12/17/2012	15:47:00	14.578	14.323	0.255	0.588	2.16	-0.408	4.90
12/17/2012	16:02:00	14.588	14.313	0.275	0.634	2.16	-0.454	5.45
12/17/2012	16:17:00	14.589	14.324	0.265	0.611	2.16	-0.431	5.18
12/17/2012	16:32:00	14.591	14.321	0.270	0.623	2.16	-0.443	5.31
12/17/2012	16:47:00	14.592	14.326	0.266	0.614	2.16	-0.434	5.20
12/17/2012	17:02:00	14.592	14.311	0.281	0.648	2.16	-0.468	5.62
12/17/2012	17:17:00	14.571	14.312	0.259	0.598	2.16	-0.418	5.01
12/17/2012	17:32:00	14.593	14.303	0.290	0.669	2.16	-0.489	5.87
12/17/2012	17:47:00	14.582	14.323	0.259	0.598	2.16	-0.418	5.01
12/17/2012	18:02:00	14.583	14.310	0.273	0.630	2.16	-0.450	5.40
12/17/2012	18:17:00	14.562	14.310	0.252	0.581	2.16	-0.401	4.82
12/17/2012	18:32:00	14.557	14.305	0.252	0.581	2.16	-0.401	4.82
12/17/2012	18:47:00	14.570	14.314	0.256	0.591	2.16	-0.411	4.93
12/17/2012	19:02:00	14.566	14.317	0.249	0.574	2.16	-0.394	4.73
12/17/2012	19:17:00	14.556	14.314	0.242	0.558	2.16	-0.378	4.54
12/17/2012	19:32:00	14.553	14.310	0.243	0.561	2.16	-0.381	4.57
12/17/2012	19:47:00	14.549	14.313	0.236	0.544	2.16	-0.364	4.37
12/17/2012	20:02:00	14.556	14.310	0.246	0.568	2.16	-0.388	4.65
12/17/2012	20:17:00	14.545	14.317	0.228	0.526	2.16	-0.346	4.15
12/17/2012	20:32:00	14.542	14.312	0.230	0.531	2.16	-0.351	4.21
12/17/2012	20:47:00	14.545	14.318	0.227	0.524	2.16	-0.344	4.12
12/17/2012	21:02:00	14.539	14.313	0.226	0.521	2.16	-0.341	4.10
12/17/2012	21:17:00	14.538	14.316	0.222	0.512	2.16	-0.332	3.99
12/17/2012	21:32:00	14.537	14.317	0.220	0.508	2.16	-0.328	3.93
12/17/2012	21:47:00	14.536	14.310	0.226	0.521	2.16	-0.341	4.10
12/17/2012	22:02:00	14.534	14.312	0.222	0.512	2.16	-0.332	3.99
12/17/2012	22:17:00	14.536	14.309	0.227	0.524	2.16	-0.344	4.12
12/17/2012	22:32:00	14.526	14.312	0.214	0.494	2.16	-0.314	3.76
12/17/2012	22:47:00	14.525	14.312	0.213	0.491	2.16	-0.311	3.74
12/17/2012	23:02:00	14.528	14.314	0.214	0.494	2.16	-0.314	3.76
12/17/2012	23:17:00	14.521	14.313	0.208	0.480	2.16	-0.300	3.60
12/17/2012	23:32:00	14.520	14.316	0.204	0.471	2.16	-0.291	3.49
12/17/2012	23:47:00	14.522	14.314	0.208	0.480	2.16	-0.300	3.60
12/18/2012	0:02:00	14.515	14.315	0.200	0.461	2.16	-0.281	3.38
12/18/2012	0:17:00	14.520	14.315	0.205	0.473	2.16	-0.293	3.52
12/18/2012	0:32:00	14.520	14.309	0.211	0.487	2.16	-0.307	3.68
12/18/2012	0:47:00	14.515	14.301	0.214	0.494	2.16	-0.314	3.76
12/18/2012	1:02:00	14.517	14.312	0.205	0.473	2.16	-0.293	3.52
12/18/2012	1:17:00	14.517	14.301	0.216	0.498	2.16	-0.318	3.82
12/18/2012	1:32:00	14.508	14.291	0.217	0.501	2.16	-0.321	3.85
12/18/2012	1:47:00	14.508	14.315	0.193	0.445	2.16	-0.265	3.18
12/18/2012	2:02:00	14.509	14.305	0.204	0.471	2.16	-0.291	3.49
12/18/2012	2:17:00	14.503	14.294	0.209	0.482	2.16	-0.302	3.63
12/18/2012	2:32:00	14.508	14.314	0.194	0.448	2.16	-0.268	3.21
12/18/2012	2:47:00	14.503	14.306	0.197	0.454	2.16	-0.274	3.29
12/18/2012	3:02:00	14.505	14.305	0.200	0.461	2.16	-0.281	3.38
12/18/2012	3:17:00	14.502	14.293	0.209	0.482	2.16	-0.302	3.63
12/18/2012	3:32:00	14.501	14.296	0.205	0.473	2.16	-0.293	3.52
12/18/2012	3:47:00	14.508	14.309	0.199	0.459	2.16	-0.279	3.35
12/18/2012	4:02:00	14.500	14.301	0.199	0.459	2.16	-0.279	3.35
12/18/2012	4:17:00	14.499	14.310	0.189	0.436	2.16	-0.256	3.07
12/18/2012	4:32:00	14.496	14.306	0.190	0.438	2.16	-0.258	3.10
12/18/2012	4:47:00	14.497	14.309	0.188	0.434	2.16	-0.254	3.04
12/18/2012	5:02:00	14.499	14.307	0.192	0.443	2.16	-0.263	3.16
12/18/2012	5:17:00	14.496	14.315	0.181	0.418	2.16	-0.238	2.85
12/18/2012	5:32:00	14.500	14.306	0.194	0.448	2.16	-0.268	3.21
12/18/2012	5:47:00	14.498	14.315	0.183	0.422	2.16	-0.242	2.91
12/18/2012	6:02:00	14.496	14.316	0.180	0.415	2.16	-0.235	2.82
12/18/2012	6:17:00	14.501	14.327	0.174	0.401	2.16	-0.221	2.66
12/18/2012	6:32:00	14.505	14.320	0.185	0.427	2.16	-0.247	2.96
12/18/2012	6:47:00	14.503	14.320	0.183	0.422	2.16	-0.242	2.91
12/18/2012	7:02:00	14.507	14.333	0.174	0.401	2.16	-0.221	2.66
12/18/2012	7:17:00	14.505	14.325	0.180	0.415	2.16	-0.235	2.82
12/18/2012	7:32:00	14.507	14.331	0.176	0.406	2.16	-0.226	2.71
12/18/2012	7:47:00	14.510	14.334	0.176	0.406	2.16	-0.226	2.71
12/18/2012	8:02:00	14.511	14.332	0.179	0.413	2.16	-0.233	2.80
12/18/2012	8:17:00	14.510	14.328	0.182	0.420	2.16	-0.240	2.88
12/18/2012	8:32:00	14.511	14.337	0.174	0.401	2.16	-0.221	2.66
12/18/2012	8:47:00	14.513	14.339	0.174	0.401	2.16	-0.221	2.66
12/18/2012	9:02:00	14.516	14.339	0.177	0.408	2.16	-0.228	2.74
12/18/2012	9:17:00	14.515	14.339	0.176	0.406	2.16	-0.226	2.71
12/18/2012	9:32:00	14.522	14.342	0.180	0.415	2.16	-0.235	2.82
12/18/2012	9:47:00	14.523	14.340	0.183	0.422	2.16	-0.242	2.91
12/18/2012	10:02:00	14.525	14.336	0.189	0.436	2.16	-0.256	3.07
12/18/2012	10:17:00	14.523	14.340	0.183	0.422	2.16	-0.242	2.91
12/18/2012	10:32:00	14.523	14.345	0.178	0.411	2.16	-0.231	2.77
12/18/2012	10:47:00	14.522	14.337	0.185	0.427	2.16	-0.247	2.96
12/18/2012	11:02:00	14.526	14.342	0.184	0.424	2.16	-0.244	2.93
12/18/2012	11:17:00	14.527	14.341	0.186	0.429	2.16	-0.249	2.99
12/18/2012	11:32:00	14.522	14.341	0.181	0.418	2.16	-0.238	2.85
12/18/2012	11:47:00	14.526	14.338	0.188	0.434	2.16	-0.254	3.04
12/18/2012	12:02:00	14.523	14.352	0.171	0.394	2.16	-0.214	2.57
12/18/2012	12:17:00	14.527	14.341	0.186	0.429	2.16	-0.249	2.99
12/18/2012	12:32:00	14.524	14.347	0.177	0.408	2.16	-0.228	2.74
12/18/2012	12:47:00	14.526	14.350	0.176	0.406	2.16	-0.226	2.71
12/18/2012	13:02:00	14.525	14.348	0.177	0.408	2.16	-0.228	2.74
12/18/2012	13:17:00	14.525	14.352	0.173	0.399	2.16	-0.219	2.63
12/18/2012	13:32:00	14.522	14.359	0.163	0.376	2.16	-0.196	2.35
12/18/2012	13:47:00	14.527	14.367	0.160	0.369	2.16	-0.189	2.27
12/18/2012	14:02:00	14.531	14.368	0.163	0.376	2.16	-0.196	2.35
12/18/2012	14:17:00	14.534	14.370	0.164	0.378	2.16	-0.198	2.38
12/18/2012	14:32:00	14.530	14.371	0.159	0.367	2.16	-0.187	2.24
12/18/2012	14:47:00	14.538	14.371	0.167	0.385	2.16	-0.205	2.46
12/18/2012	15:02:00	14.536	14.377	0.159	0.367	2.16	-0.187	2.24
12/18/2012	15:17:00	14.542	14.381	0.161	0.371	2.16	-0.191	2.30
12/18/2012	15:32:00	14.541	14.379	0.162	0.374	2.16	-0.194	2.32
12/18/2012	15:47:00	14.548	14.382	0.166	0.383	2.16	-0.203	2.44
12/18/2012	16:02:00	14.553	14.380	0.173	0.399	2.16	-0.219	2.63
12/18/2012	16:17:00	14.551	14.389	0.162	0.374	2.16	-0.194	2.32
12/18/2012	16:32:00	14.553	14.393	0.160	0.369	2.16	-0.189	2.27
12/18/2012	16:47:00	14.556	14.397	0.159	0.367	2.16	-0.187	2.24
12/18/2012	17:02:00	14.556	14.396	0.160	0.369	2.16	-0.189	2.27
12/18/2012	17:17:00	14.562	14.389	0.173	0.399	2.16	-0.219	2.63
12/18/2012	17:32:00	14.561	14.408	0.153	0.353	2.16	-0.173	2.08
12/18/2012	17:47:00	14.559	14.409	0.150	0.346	2.16	-0.166	1.99
12/18/2012	18:02:00	14.565	14.408	0.157	0.362	2.16	-0.182	2.19
12/18/2012	18:17:00	14.569	14.401	0.168	0.388	2.16	-0.208	2.49
12/18/2012	18:32:00	14.570	14.410	0.160	0.369	2.16	-0.189	2.27
12/18/2012	18:47:00	14.575	14.421	0.154	0.355	2.16	-0.175	2.10
12/18/2012	19:02:00	14.576	14.423	0.153	0.353	2.16	-0.173	2.08
12/18/2012	19:17:00	14.585	14.425	0.160	0.369	2.16	-0.189	2.27
12/18/2012	19:32:00	14.586	14.419	0.167	0.385	2.16	-0.205	2.46
12/18/2012	19:47:00	14.588	14.426	0.162	0.374	2.16	-0.194	2.32
12/18/2012	20:02:00	14.588	14.432	0.156	0.360	2.16	-0.180	2.16

12/18/2012	20:17:00	14.588	14.437	0.151	0.348	2.16	-0.168	2.02
12/18/2012	20:32:00	14.590	14.427	0.163	0.376	2.16	-0.196	2.35
12/18/2012	20:47:00	14.593	14.426	0.167	0.385	2.16	-0.205	2.46
12/18/2012	21:02:00	14.597	14.421	0.176	0.406	2.16	-0.226	2.71
12/18/2012	21:17:00	14.602	14.417	0.185	0.427	2.16	-0.247	2.96
12/18/2012	21:32:00	14.602	14.421	0.181	0.418	2.16	-0.238	2.85
12/18/2012	21:47:00	14.599	14.422	0.177	0.408	2.16	-0.228	2.74
12/18/2012	22:02:00	14.593	14.427	0.166	0.383	2.16	-0.203	2.44
12/18/2012	22:17:00	14.586	14.428	0.158	0.365	2.16	-0.185	2.21
12/18/2012	22:32:00	14.586	14.429	0.157	0.362	2.16	-0.182	2.19
12/18/2012	22:47:00	14.582	14.434	0.148	0.341	2.16	-0.161	1.94
12/18/2012	23:02:00	14.585	14.431	0.154	0.355	2.16	-0.175	2.10
12/18/2012	23:17:00	14.592	14.431	0.161	0.371	2.16	-0.191	2.30
12/18/2012	23:32:00	14.590	14.427	0.163	0.376	2.16	-0.196	2.35
12/18/2012	23:47:00	14.591	14.426	0.165	0.381	2.16	-0.201	2.41
12/19/2012	0:02:00	14.594	14.425	0.169	0.390	2.16	-0.210	2.52
12/19/2012	0:17:00	14.594	14.432	0.162	0.374	2.16	-0.194	2.32
12/19/2012	0:32:00	14.596	14.433	0.163	0.376	2.16	-0.196	2.35
12/19/2012	0:47:00	14.596	14.435	0.161	0.371	2.16	-0.191	2.30
12/19/2012	1:02:00	14.595	14.438	0.157	0.362	2.16	-0.182	2.19
12/19/2012	1:17:00	14.592	14.434	0.158	0.365	2.16	-0.185	2.21
12/19/2012	1:32:00	14.597	14.436	0.161	0.371	2.16	-0.191	2.30
12/19/2012	1:47:00	14.598	14.437	0.161	0.371	2.16	-0.191	2.30
12/19/2012	2:02:00	14.602	14.434	0.168	0.388	2.16	-0.208	2.49
12/19/2012	2:17:00	14.601	14.437	0.164	0.378	2.16	-0.198	2.38
12/19/2012	2:32:00	14.601	14.429	0.172	0.397	2.16	-0.217	2.60
12/19/2012	2:47:00	14.600	14.440	0.160	0.369	2.16	-0.189	2.27
12/19/2012	3:02:00	14.601	14.427	0.174	0.401	2.16	-0.221	2.66
12/19/2012	3:17:00	14.600	14.426	0.174	0.401	2.16	-0.221	2.66
12/19/2012	3:32:00	14.600	14.432	0.168	0.388	2.16	-0.208	2.49
12/19/2012	3:47:00	14.599	14.440	0.159	0.367	2.16	-0.187	2.24
12/19/2012	4:02:00	14.601	14.444	0.157	0.362	2.16	-0.182	2.19
12/19/2012	4:17:00	14.598	14.435	0.163	0.376	2.16	-0.196	2.35
12/19/2012	4:32:00	14.598	14.455	0.143	0.330	2.16	-0.150	1.80
12/19/2012	4:47:00	14.599	14.446	0.153	0.353	2.16	-0.173	2.08
12/19/2012	5:02:00	14.603	14.448	0.155	0.358	2.16	-0.178	2.13
12/19/2012	5:17:00	14.609	14.442	0.167	0.385	2.16	-0.205	2.46
12/19/2012	5:32:00	14.606	14.445	0.161	0.371	2.16	-0.191	2.30
12/19/2012	5:47:00	14.612	14.450	0.162	0.374	2.16	-0.194	2.32
12/19/2012	6:02:00	14.606	14.463	0.143	0.330	2.16	-0.150	1.80
12/19/2012	6:17:00	14.614	14.457	0.157	0.362	2.16	-0.182	2.19
12/19/2012	6:32:00	14.616	14.468	0.148	0.341	2.16	-0.161	1.94
12/19/2012	6:47:00	14.620	14.463	0.157	0.362	2.16	-0.182	2.19
12/19/2012	7:02:00	14.623	14.470	0.153	0.353	2.16	-0.173	2.08
12/19/2012	7:17:00	14.623	14.468	0.155	0.358	2.16	-0.178	2.13
12/19/2012	7:32:00	14.631	14.474	0.157	0.362	2.16	-0.182	2.19
12/19/2012	7:47:00	14.632	14.470	0.162	0.374	2.16	-0.194	2.32
12/19/2012	8:02:00	14.635	14.476	0.159	0.367	2.16	-0.187	2.24
12/19/2012	8:17:00	14.636	14.478	0.158	0.365	2.16	-0.185	2.21
12/19/2012	8:32:00	14.644	14.480	0.164	0.378	2.16	-0.198	2.38
12/19/2012	8:47:00	14.645	14.479	0.166	0.383	2.16	-0.203	2.44
12/19/2012	9:02:00	14.643	14.484	0.159	0.367	2.16	-0.187	2.24
12/19/2012	9:17:00	14.645	14.487	0.158	0.365	2.16	-0.185	2.21
12/19/2012	9:32:00	14.647	14.488	0.159	0.367	2.16	-0.187	2.24
12/19/2012	9:47:00	14.646	14.485	0.161	0.371	2.16	-0.191	2.30
12/19/2012	10:02:00	14.650	14.481	0.169	0.390	2.16	-0.210	2.52
12/19/2012	10:17:00	14.648	14.481	0.167	0.385	2.16	-0.205	2.46
12/19/2012	10:32:00	14.654	14.479	0.175	0.404	2.16	-0.224	2.68
12/19/2012	10:47:00	14.653	14.479	0.174	0.401	2.16	-0.221	2.66
12/19/2012	11:02:00	14.649	14.471	0.178	0.411	2.16	-0.231	2.77
12/19/2012	11:17:00	14.647	14.469	0.178	0.411	2.16	-0.231	2.77
12/19/2012	11:32:00	14.648	14.471	0.177	0.408	2.16	-0.228	2.74
12/19/2012	11:47:00	14.643	14.469	0.174	0.401	2.16	-0.221	2.66
12/19/2012	12:02:00	14.646	14.466	0.180	0.415	2.16	-0.235	2.82
12/19/2012	12:17:00	14.636	14.469	0.167	0.385	2.16	-0.205	2.46
12/19/2012	12:32:00	14.634	14.469	0.165	0.381	2.16	-0.201	2.41
12/19/2012	12:47:00	14.637	14.464	0.173	0.399	2.16	-0.219	2.63
12/19/2012	13:02:00	14.638	14.462	0.176	0.406	2.16	-0.226	2.71
12/19/2012	13:17:00	14.631	14.465	0.166	0.383	2.16	-0.203	2.44
12/19/2012	13:32:00	14.630	14.466	0.164	0.378	2.16	-0.198	2.38
12/19/2012	13:47:00	14.635	14.463	0.172	0.397	2.16	-0.217	2.60
12/19/2012	14:02:00	14.627	14.464	0.163	0.376	2.16	-0.196	2.35
12/19/2012	14:17:00	14.626	14.466	0.160	0.369	2.16	-0.189	2.27
12/19/2012	14:32:00	14.623	14.466	0.157	0.362	2.16	-0.182	2.19
12/19/2012	14:47:00	14.626	14.469	0.157	0.362	2.16	-0.182	2.19
12/19/2012	15:02:00	14.628	14.466	0.162	0.374	2.16	-0.194	2.32
12/19/2012	15:17:00	14.624	14.468	0.156	0.360	2.16	-0.180	2.16
12/19/2012	15:32:00	14.631	14.469	0.162	0.374	2.16	-0.194	2.32
12/19/2012	15:47:00	14.622	14.472	0.150	0.346	2.16	-0.166	1.99
12/19/2012	16:02:00	14.631	14.471	0.160	0.369	2.16	-0.189	2.27
12/19/2012	16:17:00	14.634	14.477	0.157	0.362	2.16	-0.182	2.19
12/19/2012	16:32:00	14.630	14.474	0.156	0.360	2.16	-0.180	2.16
12/19/2012	16:47:00	14.643	14.480	0.163	0.376	2.16	-0.196	2.35
12/19/2012	17:02:00	14.644	14.487	0.157	0.362	2.16	-0.182	2.19
12/19/2012	17:17:00	14.634	14.488	0.146	0.337	2.16	-0.157	1.88
12/19/2012	17:32:00	14.644	14.498	0.146	0.337	2.16	-0.157	1.88
12/19/2012	17:47:00	14.639	14.496	0.143	0.330	2.16	-0.150	1.80
12/19/2012	18:02:00	14.651	14.488	0.163	0.376	2.16	-0.196	2.35
12/19/2012	18:17:00	14.652	14.490	0.162	0.374	2.16	-0.194	2.32
12/19/2012	18:32:00	14.651	14.487	0.164	0.378	2.16	-0.198	2.38
12/19/2012	18:47:00	14.652	14.491	0.161	0.371	2.16	-0.191	2.30
12/19/2012	19:02:00	14.654	14.493	0.161	0.371	2.16	-0.191	2.30
12/19/2012	19:17:00	14.656	14.490	0.166	0.383	2.16	-0.203	2.44
12/19/2012	19:32:00	14.655	14.498	0.157	0.362	2.16	-0.182	2.19
12/19/2012	19:47:00	14.656	14.491	0.165	0.381	2.16	-0.201	2.41
12/19/2012	20:02:00	14.660	14.501	0.159	0.367	2.16	-0.187	2.24
12/19/2012	20:17:00	14.658	14.498	0.160	0.369	2.16	-0.189	2.27
12/19/2012	20:32:00	14.659	14.508	0.151	0.348	2.16	-0.168	2.02
12/19/2012	20:47:00	14.656	14.508	0.148	0.341	2.16	-0.161	1.94
12/19/2012	21:02:00	14.661	14.505	0.156	0.360	2.16	-0.180	2.16
12/19/2012	21:17:00	14.659	14.513	0.146	0.337	2.16	-0.157	1.88
12/19/2012	21:32:00	14.663	14.508	0.155	0.358	2.16	-0.178	2.13
12/19/2012	21:47:00	14.671	14.504	0.167	0.385	2.16	-0.205	2.46
12/19/2012	22:02:00	14.667	14.509	0.158	0.365	2.16	-0.185	2.21
12/19/2012	22:17:00	14.672	14.504	0.168	0.388	2.16	-0.208	2.49
12/19/2012	22:32:00	14.672	14.504	0.168	0.388	2.16	-0.208	2.49
12/19/2012	22:47:00	14.665	14.508	0.157	0.362	2.16	-0.182	2.19
12/19/2012	23:02:00	14.667	14.511	0.156	0.360	2.16	-0.180	2.16
12/19/2012	23:17:00	14.674	14.515	0.159	0.367	2.16	-0.187	2.24
12/19/2012	23:32:00	14.671	14.505	0.166	0.383	2.16	-0.203	2.44
12/19/2012	23:47:00	14.670	14.507	0.163	0.376	2.16	-0.196	2.35
12/20/2012	0:02:00	14.673	14.506	0.167	0.385	2.16	-0.205	2.46
12/20/2012	0:17:00	14.677	14.505	0.172	0.397	2.16	-0.217	2.60
12/20/2012	0:32:00	14.670	14.502	0.168	0.388	2.16	-0.208	2.49
12/20/2012	0:47:00	14.669	14.503	0.166	0.383	2.16	-0.203	2.44
12/20/2012	1:02:00	14.671	14.509	0.162	0.374	2.16	-0.194	2.32
12/20/2012	1:17:00	14.662	14.505	0.157	0.362	2.16	-0.182	2.19
12/20/2012	1:32:00	14.665	14.505	0.160	0.369	2.16	-0.189	2.27
12/20/2012	1:47:00	14.665	14.508	0.157	0.362	2.16	-0.182	2.19
12/20/2012	2:02:00	14.666	14.507	0.159	0.367	2.16	-0.187	2.24
12/20/2012	2:17:00	14.664	14.511	0.153	0.353	2.16	-0.173	2.08
12/20/2012	2:32:00	14.662	14.511	0.151	0.348	2.16	-0.168	2.02
12/20/2012	2:47:00	14.666	14.510	0.156	0.360	2.16	-0.180	2.16
12/20/2012	3:02:00	14.665	14.507	0.158	0.365	2.16	-0.185	2.21
12/20/2012	3:17:00	14.669	14.507	0.162	0.374	2.16	-0.194	2.32
12/20/2012	3:32:00	14.672	14.498	0.174	0.401	2.16	-0.221	2.66
12/20/2012	3:47:00	14.669	14.504	0.165	0.381	2.16	-0.201	2.41
12/20/2012	4:02:00	14.666	14.505	0.161	0.371	2.16	-0.191	2.30
12/20/2012	4:17:00	14.664	14.502	0.162	0.374	2.16	-0.194	2.32
12/20/2012	4:32:00	14.660	14.502	0.158	0.365	2.16	-0.185	2.21
12/20/2012	4:47:00	14.661	14.501	0.160	0.369	2.16	-0.189	2.27
12/20/2012	5:02:00	14.658	14.502	0.156	0.360	2.16	-0.180	2.16
12/20/2012	5:17:00	14.664	14.508	0.156	0.360	2.16	-0.180	2.16

12/20/2012	5:32:00	14.668	14.502	0.166	0.383	2.16	-0.203	2.44
12/20/2012	5:47:00	14.661	14.506	0.155	0.358	2.16	-0.178	2.13
12/20/2012	6:02:00	14.663	14.500	0.163	0.376	2.16	-0.196	2.35
12/20/2012	6:17:00	14.661	14.506	0.155	0.358	2.16	-0.178	2.13
12/20/2012	6:32:00	14.661	14.496	0.165	0.381	2.16	-0.201	2.41
12/20/2012	6:47:00	14.665	14.497	0.168	0.388	2.16	-0.208	2.49
12/20/2012	7:02:00	14.663	14.491	0.172	0.397	2.16	-0.217	2.60
12/20/2012	7:17:00	14.659	14.490	0.169	0.390	2.16	-0.210	2.52
12/20/2012	7:32:00	14.657	14.488	0.169	0.390	2.16	-0.210	2.52
12/20/2012	7:47:00	14.656	14.490	0.166	0.383	2.16	-0.203	2.44
12/20/2012	8:02:00	14.651	14.488	0.163	0.376	2.16	-0.196	2.35
12/20/2012	8:17:00	14.651	14.496	0.155	0.358	2.16	-0.178	2.13
12/20/2012	8:32:00	14.648	14.484	0.164	0.378	2.16	-0.198	2.38
12/20/2012	8:47:00	14.651	14.485	0.166	0.383	2.16	-0.203	2.44
12/20/2012	9:02:00	14.653	14.487	0.166	0.383	2.16	-0.203	2.44
12/20/2012	9:17:00	14.648	14.485	0.163	0.376	2.16	-0.196	2.35
12/20/2012	9:32:00	14.651	14.480	0.171	0.394	2.16	-0.214	2.57
12/20/2012	9:47:00	14.645	14.482	0.163	0.376	2.16	-0.196	2.35
12/20/2012	10:02:00	14.641	14.477	0.164	0.378	2.16	-0.198	2.38
12/20/2012	10:17:00	14.641	14.475	0.166	0.383	2.16	-0.203	2.44
12/20/2012	10:32:00	14.643	14.463	0.180	0.415	2.16	-0.235	2.82
12/20/2012	10:47:00	14.635	14.452	0.183	0.422	2.16	-0.242	2.91
12/20/2012	11:02:00	14.639	14.454	0.185	0.427	2.16	-0.247	2.96
12/20/2012	11:17:00	14.632	14.450	0.182	0.420	2.16	-0.240	2.88
12/20/2012	11:32:00	14.632	14.433	0.199	0.459	2.16	-0.279	3.35
12/20/2012	11:47:00	14.615	14.420	0.195	0.450	2.16	-0.270	3.24
12/20/2012	12:02:00	14.621	14.408	0.213	0.491	2.16	-0.311	3.74
12/20/2012	12:17:00	14.610	14.403	0.207	0.478	2.16	-0.298	3.57
12/20/2012	12:32:00	14.598	14.400	0.198	0.457	2.16	-0.277	3.32
12/20/2012	12:47:00	14.584	14.396	0.188	0.434	2.16	-0.254	3.04
12/20/2012	13:02:00	14.579	14.379	0.200	0.461	2.16	-0.281	3.38
12/20/2012	13:17:00	14.564	14.368	0.196	0.452	2.16	-0.272	3.27
12/20/2012	13:32:00	14.561	14.362	0.199	0.459	2.16	-0.279	3.35
12/20/2012	13:47:00	14.560	14.359	0.201	0.464	2.16	-0.284	3.40
12/20/2012	14:02:00	14.551	14.356	0.195	0.450	2.16	-0.270	3.24
12/20/2012	14:17:00	14.544	14.354	0.190	0.438	2.16	-0.258	3.10
12/20/2012	14:32:00	14.528	14.354	0.174	0.401	2.16	-0.221	2.66
12/20/2012	14:47:00	14.530	14.332	0.198	0.457	2.16	-0.277	3.32
12/20/2012	15:02:00	14.520	14.345	0.175	0.404	2.16	-0.224	2.68
12/20/2012	15:17:00	14.519	14.342	0.177	0.408	2.16	-0.228	2.74
12/20/2012	15:32:00	14.521	14.320	0.201	0.464	2.16	-0.284	3.40
12/20/2012	15:47:00	14.510	14.312	0.198	0.457	2.16	-0.277	3.32
12/20/2012	16:02:00	14.497	14.310	0.187	0.431	2.16	-0.251	3.02
12/20/2012	16:17:00	14.512	14.302	0.210	0.484	2.16	-0.304	3.65
12/20/2012	16:32:00	14.499	14.300	0.199	0.459	2.16	-0.279	3.35
12/20/2012	16:47:00	14.490	14.293	0.197	0.454	2.16	-0.274	3.29
12/20/2012	17:02:00	14.473	14.284	0.189	0.436	2.16	-0.256	3.07
12/20/2012	17:17:00	14.470	14.270	0.200	0.461	2.16	-0.281	3.38
12/20/2012	17:32:00	14.469	14.263	0.206	0.475	2.16	-0.295	3.54
12/20/2012	17:47:00	14.469	14.268	0.201	0.464	2.16	-0.284	3.40
12/20/2012	18:02:00	14.462	14.255	0.207	0.478	2.16	-0.298	3.57
12/20/2012	18:17:00	14.451	14.248	0.203	0.468	2.16	-0.288	3.46
12/20/2012	18:32:00	14.439	14.251	0.188	0.434	2.16	-0.254	3.04
12/20/2012	18:47:00	14.447	14.241	0.206	0.475	2.16	-0.295	3.54
12/20/2012	19:02:00	14.447	14.242	0.205	0.473	2.16	-0.293	3.52
12/20/2012	19:17:00	14.439	14.241	0.198	0.457	2.16	-0.277	3.32
12/20/2012	19:32:00	14.436	14.255	0.181	0.418	2.16	-0.238	2.85
12/20/2012	19:47:00	14.435	14.252	0.183	0.422	2.16	-0.242	2.91
12/20/2012	20:02:00	14.427	14.253	0.174	0.401	2.16	-0.221	2.66
12/20/2012	20:17:00	14.431	14.255	0.176	0.406	2.16	-0.226	2.71
12/20/2012	20:32:00	14.445	14.256	0.189	0.436	2.16	-0.256	3.07
12/20/2012	20:47:00	14.478	14.256	0.222	0.512	2.16	-0.332	3.99
12/20/2012	21:02:00	14.643	14.259	0.384	0.886	2.16	-0.706	8.47
12/20/2012	21:17:00	14.831	14.262	0.569	1.313	2.16	-1.133	13.59
12/20/2012	21:32:00	14.910	14.262	0.648	1.495	2.16	-1.315	15.78
12/20/2012	21:47:00	14.873	14.260	0.613	1.414	2.16	-1.234	14.81
12/20/2012	22:02:00	14.804	14.256	0.548	1.264	2.16	-1.084	13.01
12/20/2012	22:17:00	14.723	14.252	0.471	1.087	2.16	-0.907	10.88
12/20/2012	22:32:00	14.680	14.273	0.407	0.939	2.16	-0.759	9.11
12/20/2012	22:47:00	14.633	14.267	0.366	0.844	2.16	-0.664	7.97
12/20/2012	23:02:00	14.602	14.259	0.343	0.791	2.16	-0.611	7.34
12/20/2012	23:17:00	14.586	14.278	0.308	0.711	2.16	-0.531	6.37
12/20/2012	23:32:00	14.572	14.276	0.296	0.683	2.16	-0.503	6.03
12/20/2012	23:47:00	14.557	14.283	0.274	0.632	2.16	-0.452	5.43
12/21/2012	0:02:00	14.550	14.279	0.271	0.625	2.16	-0.445	5.34
12/21/2012	0:17:00	14.547	14.295	0.252	0.581	2.16	-0.401	4.82
12/21/2012	0:32:00	14.544	14.279	0.265	0.611	2.16	-0.431	5.18
12/21/2012	0:47:00	14.541	14.296	0.245	0.565	2.16	-0.385	4.62
12/21/2012	1:02:00	14.548	14.290	0.258	0.595	2.16	-0.415	4.98
12/21/2012	1:17:00	14.541	14.298	0.243	0.561	2.16	-0.381	4.57
12/21/2012	1:32:00	14.536	14.292	0.244	0.563	2.16	-0.383	4.59
12/21/2012	1:47:00	14.537	14.291	0.246	0.568	2.16	-0.388	4.65
12/21/2012	2:02:00	14.541	14.291	0.250	0.577	2.16	-0.397	4.76
12/21/2012	2:17:00	14.539	14.296	0.243	0.561	2.16	-0.381	4.57
12/21/2012	2:32:00	14.540	14.299	0.241	0.556	2.16	-0.376	4.51
12/21/2012	2:47:00	14.535	14.291	0.244	0.563	2.16	-0.383	4.59
12/21/2012	3:02:00	14.536	14.300	0.236	0.544	2.16	-0.364	4.37
12/21/2012	3:17:00	14.538	14.291	0.247	0.570	2.16	-0.390	4.68
12/21/2012	3:32:00	14.538	14.300	0.238	0.549	2.16	-0.369	4.43
12/21/2012	3:47:00	14.543	14.304	0.239	0.551	2.16	-0.371	4.46
12/21/2012	4:02:00	14.533	14.295	0.238	0.549	2.16	-0.369	4.43
12/21/2012	4:17:00	14.531	14.292	0.239	0.551	2.16	-0.371	4.46
12/21/2012	4:32:00	14.533	14.296	0.237	0.547	2.16	-0.367	4.40
12/21/2012	4:47:00	14.530	14.303	0.227	0.524	2.16	-0.344	4.12
12/21/2012	5:02:00	14.532	14.300	0.232	0.535	2.16	-0.355	4.26
12/21/2012	5:17:00	14.522	14.300	0.222	0.512	2.16	-0.332	3.99
12/21/2012	5:32:00	14.530	14.302	0.228	0.526	2.16	-0.346	4.15
12/21/2012	5:47:00	14.530	14.306	0.224	0.517	2.16	-0.337	4.04
12/21/2012	6:02:00	14.525	14.310	0.215	0.496	2.16	-0.316	3.79
12/21/2012	6:17:00	14.529	14.306	0.223	0.514	2.16	-0.334	4.01
12/21/2012	6:32:00	14.530	14.312	0.218	0.503	2.16	-0.323	3.88
12/21/2012	6:47:00	14.533	14.310	0.223	0.514	2.16	-0.334	4.01
12/21/2012	7:02:00	14.531	14.313	0.218	0.503	2.16	-0.323	3.88
12/21/2012	7:17:00	14.533	14.319	0.214	0.494	2.16	-0.314	3.76
12/21/2012	7:32:00	14.539	14.322	0.217	0.501	2.16	-0.321	3.85
12/21/2012	7:47:00	14.532	14.311	0.221	0.510	2.16	-0.330	3.96
12/21/2012	8:02:00	14.537	14.306	0.231	0.533	2.16	-0.353	4.24
12/21/2012	8:17:00	14.537	14.315	0.222	0.512	2.16	-0.332	3.99
12/21/2012	8:32:00	14.537	14.331	0.206	0.475	2.16	-0.295	3.54
12/21/2012	8:47:00	14.540	14.322	0.218	0.503	2.16	-0.323	3.88
12/21/2012	9:02:00	14.536	14.331	0.205	0.473	2.16	-0.293	3.52
12/21/2012	9:17:00	14.536	14.341	0.195	0.450	2.16	-0.270	3.24
12/21/2012	9:32:00	14.550	14.329	0.221	0.510	2.16	-0.330	3.96
12/21/2012	9:47:00	14.549	14.349	0.200	0.461	2.16	-0.281	3.38
12/21/2012	10:02:00	14.549	14.351	0.198	0.457	2.16	-0.277	3.32
12/21/2012	10:17:00	14.556	14.347	0.209	0.482	2.16	-0.302	3.63
12/21/2012	10:32:00	14.555	14.333	0.222	0.512	2.16	-0.332	3.99
12/21/2012	10:47:00	14.551	14.338	0.213	0.491	2.16	-0.311	3.74
12/21/2012	11:02:00	14.552	14.329	0.223	0.514	2.16	-0.334	4.01
12/21/2012	11:17:00	14.552	14.330	0.222	0.512	2.16	-0.332	3.99
12/21/2012	11:32:00	14.549	14.325	0.224	0.517	2.16	-0.337	4.04
12/21/2012	11:47:00	14.548	14.328	0.220	0.508	2.16	-0.328	3.93
12/21/2012	12:02:00	14.552	14.334	0.218	0.503	2.16	-0.323	3.88
12/21/2012	12:17:00	14.542	14.310	0.232	0.535	2.16	-0.355	4.26
12/21/2012	12:32:00	14.539	14.332	0.207	0.478	2.16	-0.298	3.57
12/21/2012	12:47:00	14.537	14.327	0.210	0.484	2.16	-0.304	3.65
12/21/2012	13:02:00	14.537	14.326	0.211	0.487	2.16	-0.307	3.68
12/21/2012	13:17:00	14.534	14.325	0.209	0.482	2.16	-0.302	3.63
12/21/2012	13:32:00	14.532	14.333	0.199	0.459	2.16	-0.279	3.35
12/21/2012	13:47:00	14.532	14.340	0.192	0.443	2.16	-0.263	3.16
12/21/2012	14:02:00	14.529	14.345	0.184	0.424	2.16	-0.244	2.93
12/21/2012	14:17:00	14.535	14.340	0.195	0.450	2.16	-0.270	3.24
12/21/2012	14:32:00	14.535	14.342	0.193	0.445	2.16	-0.265	3.18

12/21/2012	14:47:00	14.539	14.358	0.181	0.418	2.16	-0.238	2.85
12/21/2012	15:02:00	14.536	14.364	0.172	0.397	2.16	-0.217	2.60
12/21/2012	15:17:00	14.542	14.361	0.181	0.418	2.16	-0.238	2.85
12/21/2012	15:32:00	14.548	14.368	0.180	0.415	2.16	-0.235	2.82
12/21/2012	15:47:00	14.550	14.360	0.190	0.438	2.16	-0.258	3.10
12/21/2012	16:02:00	14.553	14.360	0.193	0.445	2.16	-0.265	3.18
12/21/2012	16:17:00	14.561	14.361	0.200	0.461	2.16	-0.281	3.38
12/21/2012	16:32:00	14.558	14.367	0.191	0.441	2.16	-0.261	3.13
12/21/2012	16:47:00	14.569	14.356	0.213	0.491	2.16	-0.311	3.74
12/21/2012	17:02:00	14.566	14.381	0.185	0.427	2.16	-0.247	2.96
12/21/2012	17:17:00	14.566	14.378	0.188	0.434	2.16	-0.254	3.04
12/21/2012	17:32:00	14.564	14.369	0.195	0.450	2.16	-0.270	3.24
12/21/2012	17:47:00	14.570	14.377	0.193	0.445	2.16	-0.265	3.18
12/21/2012	18:02:00	14.569	14.378	0.191	0.441	2.16	-0.261	3.13
12/21/2012	18:17:00	14.573	14.386	0.187	0.431	2.16	-0.251	3.02
12/21/2012	18:32:00	14.573	14.379	0.194	0.448	2.16	-0.268	3.21
12/21/2012	18:47:00	14.577	14.377	0.200	0.461	2.16	-0.281	3.38
12/21/2012	19:02:00	14.576	14.372	0.204	0.471	2.16	-0.291	3.49
12/21/2012	19:17:00	14.585	14.382	0.203	0.468	2.16	-0.288	3.46
12/21/2012	19:32:00	14.582	14.382	0.200	0.461	2.16	-0.281	3.38
12/21/2012	19:47:00	14.580	14.384	0.196	0.452	2.16	-0.272	3.27
12/21/2012	20:02:00	14.577	14.384	0.193	0.445	2.16	-0.265	3.18
12/21/2012	20:17:00	14.580	14.393	0.187	0.431	2.16	-0.251	3.02
12/21/2012	20:32:00	14.587	14.389	0.198	0.457	2.16	-0.277	3.32
12/21/2012	20:47:00	14.582	14.396	0.186	0.429	2.16	-0.249	2.99
12/21/2012	21:02:00	14.584	14.398	0.186	0.429	2.16	-0.249	2.99
12/21/2012	21:17:00	14.587	14.404	0.183	0.422	2.16	-0.242	2.91
12/21/2012	21:32:00	14.588	14.396	0.192	0.443	2.16	-0.263	3.16
12/21/2012	21:47:00	14.592	14.401	0.191	0.441	2.16	-0.261	3.13
12/21/2012	22:02:00	14.597	14.398	0.199	0.459	2.16	-0.279	3.35
12/21/2012	22:17:00	14.593	14.403	0.190	0.438	2.16	-0.258	3.10
12/21/2012	22:32:00	14.592	14.404	0.188	0.434	2.16	-0.254	3.04
12/21/2012	22:47:00	14.597	14.404	0.193	0.445	2.16	-0.265	3.18
12/21/2012	23:02:00	14.599	14.400	0.199	0.459	2.16	-0.279	3.35
12/21/2012	23:17:00	14.600	14.403	0.197	0.454	2.16	-0.274	3.29
12/21/2012	23:32:00	14.593	14.399	0.194	0.448	2.16	-0.268	3.21
12/21/2012	23:47:00	14.595	14.408	0.187	0.431	2.16	-0.251	3.02
12/22/2012	0:02:00	14.597	14.408	0.189	0.436	2.16	-0.256	3.07
12/22/2012	0:17:00	14.601	14.413	0.188	0.434	2.16	-0.254	3.04
12/22/2012	0:32:00	14.601	14.415	0.186	0.429	2.16	-0.249	2.99
12/22/2012	0:47:00	14.600	14.416	0.184	0.424	2.16	-0.244	2.93
12/22/2012	1:02:00	14.599	14.416	0.183	0.422	2.16	-0.242	2.91
12/22/2012	1:17:00	14.602	14.420	0.182	0.420	2.16	-0.240	2.88
12/22/2012	1:32:00	14.603	14.422	0.181	0.418	2.16	-0.238	2.85
12/22/2012	1:47:00	14.609	14.426	0.183	0.422	2.16	-0.242	2.91
12/22/2012	2:02:00	14.606	14.429	0.177	0.408	2.16	-0.228	2.74
12/22/2012	2:17:00	14.609	14.430	0.179	0.413	2.16	-0.233	2.80
12/22/2012	2:32:00	14.610	14.431	0.179	0.413	2.16	-0.233	2.80
12/22/2012	2:47:00	14.612	14.437	0.175	0.404	2.16	-0.224	2.68
12/22/2012	3:02:00	14.617	14.439	0.178	0.411	2.16	-0.231	2.77
12/22/2012	3:17:00	14.620	14.443	0.177	0.408	2.16	-0.228	2.74
12/22/2012	3:32:00	14.621	14.442	0.179	0.413	2.16	-0.233	2.80
12/22/2012	3:47:00	14.621	14.445	0.176	0.406	2.16	-0.226	2.71
12/22/2012	4:02:00	14.623	14.445	0.178	0.411	2.16	-0.231	2.77
12/22/2012	4:17:00	14.629	14.447	0.182	0.420	2.16	-0.240	2.88
12/22/2012	4:32:00	14.627	14.458	0.169	0.390	2.16	-0.210	2.52
12/22/2012	4:47:00	14.631	14.461	0.170	0.392	2.16	-0.212	2.55
12/22/2012	5:02:00	14.634	14.467	0.167	0.385	2.16	-0.205	2.46
12/22/2012	5:17:00	14.634	14.471	0.163	0.376	2.16	-0.196	2.35
12/22/2012	5:32:00	14.639	14.475	0.164	0.378	2.16	-0.198	2.38
12/22/2012	5:47:00	14.643	14.476	0.167	0.385	2.16	-0.205	2.46
12/22/2012	6:02:00	14.650	14.477	0.173	0.399	2.16	-0.219	2.63
12/22/2012	6:17:00	14.652	14.490	0.162	0.374	2.16	-0.194	2.32
12/22/2012	6:32:00	14.654	14.488	0.166	0.383	2.16	-0.203	2.44
12/22/2012	6:47:00	14.658	14.496	0.162	0.374	2.16	-0.194	2.32
12/22/2012	7:02:00	14.662	14.493	0.169	0.390	2.16	-0.210	2.52
12/22/2012	7:17:00	14.666	14.498	0.168	0.388	2.16	-0.208	2.49
12/22/2012	7:32:00	14.673	14.498	0.175	0.404	2.16	-0.224	2.68
12/22/2012	7:47:00	14.672	14.505	0.167	0.385	2.16	-0.205	2.46
12/22/2012	8:02:00	14.678	14.506	0.172	0.397	2.16	-0.217	2.60
12/22/2012	8:17:00	14.679	14.508	0.171	0.394	2.16	-0.214	2.57
12/22/2012	8:32:00	14.685	14.509	0.176	0.406	2.16	-0.226	2.71
12/22/2012	8:47:00	14.685	14.507	0.178	0.411	2.16	-0.231	2.77
12/22/2012	9:02:00	14.686	14.515	0.171	0.394	2.16	-0.214	2.57
12/22/2012	9:17:00	14.694	14.513	0.181	0.418	2.16	-0.238	2.85
12/22/2012	9:32:00	14.695	14.515	0.180	0.415	2.16	-0.235	2.82
12/22/2012	9:47:00	14.695	14.511	0.184	0.424	2.16	-0.244	2.93
12/22/2012	10:02:00	14.697	14.509	0.188	0.434	2.16	-0.254	3.04
12/22/2012	10:17:00	14.698	14.506	0.192	0.443	2.16	-0.263	3.16
12/22/2012	10:32:00	14.701	14.506	0.195	0.450	2.16	-0.270	3.24
12/22/2012	10:47:00	14.697	14.504	0.193	0.445	2.16	-0.265	3.18
12/22/2012	11:02:00	14.696	14.500	0.196	0.452	2.16	-0.272	3.27
12/22/2012	11:17:00	14.689	14.499	0.190	0.438	2.16	-0.258	3.10
12/22/2012	11:32:00	14.690	14.495	0.195	0.450	2.16	-0.270	3.24
12/22/2012	11:47:00	14.686	14.495	0.191	0.441	2.16	-0.261	3.13
12/22/2012	12:02:00	14.687	14.485	0.202	0.466	2.16	-0.286	3.43
12/22/2012	12:17:00	14.686	14.482	0.204	0.471	2.16	-0.291	3.49
12/22/2012	12:32:00	14.678	14.480	0.198	0.457	2.16	-0.277	3.32
12/22/2012	12:47:00	14.682	14.484	0.198	0.457	2.16	-0.277	3.32
12/22/2012	13:02:00	14.672	14.488	0.184	0.424	2.16	-0.244	2.93
12/22/2012	13:17:00	14.670	14.476	0.194	0.448	2.16	-0.268	3.21
12/22/2012	13:32:00	14.667	14.485	0.182	0.420	2.16	-0.240	2.88
12/22/2012	13:47:00	14.663	14.486	0.177	0.408	2.16	-0.228	2.74
12/22/2012	14:02:00	14.664	14.483	0.181	0.418	2.16	-0.238	2.85
12/22/2012	14:17:00	14.665	14.484	0.181	0.418	2.16	-0.238	2.85
12/22/2012	14:32:00	14.663	14.489	0.174	0.401	2.16	-0.221	2.66
12/22/2012	14:47:00	14.667	14.488	0.179	0.413	2.16	-0.233	2.80
12/22/2012	15:02:00	14.666	14.492	0.174	0.401	2.16	-0.221	2.66
12/22/2012	15:17:00	14.667	14.496	0.171	0.394	2.16	-0.214	2.57
12/22/2012	15:32:00	14.667	14.484	0.183	0.422	2.16	-0.242	2.91
12/22/2012	15:47:00	14.666	14.495	0.171	0.394	2.16	-0.214	2.57
12/22/2012	16:02:00	14.667	14.490	0.177	0.408	2.16	-0.228	2.74
12/22/2012	16:17:00	14.669	14.496	0.173	0.399	2.16	-0.219	2.63
12/22/2012	16:32:00	14.665	14.492	0.173	0.399	2.16	-0.219	2.63
12/22/2012	16:47:00	14.670	14.499	0.171	0.394	2.16	-0.214	2.57
12/22/2012	17:02:00	14.672	14.501	0.171	0.394	2.16	-0.214	2.57
12/22/2012	17:17:00	14.673	14.485	0.188	0.434	2.16	-0.254	3.04
12/22/2012	17:32:00	14.670	14.502	0.168	0.388	2.16	-0.208	2.49
12/22/2012	17:47:00	14.672	14.503	0.169	0.390	2.16	-0.210	2.52
12/22/2012	18:02:00	14.675	14.499	0.176	0.406	2.16	-0.226	2.71
12/22/2012	18:17:00	14.675	14.497	0.178	0.411	2.16	-0.231	2.77
12/22/2012	18:32:00	14.677	14.500	0.177	0.408	2.16	-0.228	2.74
12/22/2012	18:47:00	14.680	14.500	0.180	0.415	2.16	-0.235	2.82
12/22/2012	19:02:00	14.680	14.500	0.180	0.415	2.16	-0.235	2.82
12/22/2012	19:17:00	14.678	14.503	0.175	0.404	2.16	-0.224	2.68
12/22/2012	19:32:00	14.682	14.499	0.183	0.422	2.16	-0.242	2.91
12/22/2012	19:47:00	14.678	14.505	0.173	0.399	2.16	-0.219	2.63
12/22/2012	20:02:00	14.677	14.507	0.170	0.392	2.16	-0.212	2.55
12/22/2012	20:17:00	14.677	14.508	0.169	0.390	2.16	-0.210	2.52
12/22/2012	20:32:00	14.677	14.511	0.166	0.383	2.16	-0.203	2.44
12/22/2012	20:47:00	14.679	14.507	0.172	0.397	2.16	-0.217	2.60
12/22/2012	21:02:00	14.681	14.517	0.164	0.378	2.16	-0.198	2.38
12/22/2012	21:17:00	14.684	14.508	0.176	0.406	2.16	-0.226	2.71
12/22/2012	21:32:00	14.683	14.513	0.170	0.392	2.16	-0.212	2.55
12/22/2012	21:47:00	14.688	14.513	0.175	0.404	2.16	-0.224	2.68
12/22/2012	22:02:00	14.684	14.514	0.170	0.392	2.16	-0.212	2.55
12/22/2012	22:17:00	14.680	14.514	0.166	0.383	2.16	-0.203	2.44
12/22/2012	22:32:00	14.688	14.514	0.174	0.401	2.16	-0.221	2.66
12/22/2012	22:47:00	14.687	14.515	0.172	0.397	2.16	-0.217	2.60
12/22/2012	23:02:00	14.682	14.522	0.160	0.369	2.16	-0.189	2.27
12/22/2012	23:17:00	14.684	14.517	0.167	0.385	2.16	-0.205	2.46
12/22/2012	23:32:00	14.685	14.512	0.173	0.399	2.16	-0.219	2.63
12/22/2012	23:47:00	14.685	14.519	0.166	0.383	2.16	-0.203	2.44

12/23/2012	0:02:00	14.686	14.517	0.169	0.390	2.16	-0.210	2.52
12/23/2012	0:17:00	14.684	14.516	0.168	0.388	2.16	-0.208	2.49
12/23/2012	0:32:00	14.688	14.515	0.173	0.399	2.16	-0.219	2.63
12/23/2012	0:47:00	14.684	14.516	0.168	0.388	2.16	-0.208	2.49
12/23/2012	1:02:00	14.679	14.518	0.161	0.371	2.16	-0.191	2.30
12/23/2012	1:17:00	14.683	14.522	0.161	0.371	2.16	-0.191	2.30
12/23/2012	1:32:00	14.678	14.520	0.158	0.365	2.16	-0.185	2.21
12/23/2012	1:47:00	14.683	14.520	0.163	0.376	2.16	-0.196	2.35
12/23/2012	2:02:00	14.686	14.519	0.167	0.385	2.16	-0.205	2.46
12/23/2012	2:17:00	14.687	14.524	0.163	0.376	2.16	-0.196	2.35
12/23/2012	2:32:00	14.690	14.524	0.166	0.383	2.16	-0.203	2.44
12/23/2012	2:47:00	14.689	14.525	0.164	0.378	2.16	-0.198	2.38
12/23/2012	3:02:00	14.691	14.519	0.172	0.397	2.16	-0.217	2.60
12/23/2012	3:17:00	14.692	14.521	0.171	0.394	2.16	-0.214	2.57
12/23/2012	3:32:00	14.693	14.518	0.175	0.404	2.16	-0.224	2.68
12/23/2012	3:47:00	14.690	14.515	0.175	0.404	2.16	-0.224	2.68
12/23/2012	4:02:00	14.688	14.517	0.171	0.394	2.16	-0.214	2.57
12/23/2012	4:17:00	14.685	14.517	0.168	0.388	2.16	-0.208	2.49
12/23/2012	4:32:00	14.683	14.519	0.164	0.378	2.16	-0.198	2.38
12/23/2012	4:47:00	14.682	14.526	0.156	0.360	2.16	-0.180	2.16
12/23/2012	5:02:00	14.684	14.531	0.153	0.353	2.16	-0.173	2.08
12/23/2012	5:17:00	14.680	14.529	0.151	0.348	2.16	-0.168	2.02
12/23/2012	5:32:00	14.681	14.527	0.154	0.355	2.16	-0.175	2.10
12/23/2012	5:47:00	14.688	14.534	0.154	0.355	2.16	-0.175	2.10
12/23/2012	6:02:00	14.689	14.533	0.156	0.360	2.16	-0.180	2.16
12/23/2012	6:17:00	14.693	14.535	0.158	0.365	2.16	-0.185	2.21
12/23/2012	6:32:00	14.695	14.532	0.163	0.376	2.16	-0.196	2.35
12/23/2012	6:47:00	14.692	14.535	0.157	0.362	2.16	-0.182	2.19
12/23/2012	7:02:00	14.698	14.537	0.161	0.371	2.16	-0.191	2.30
12/23/2012	7:17:00	14.699	14.538	0.161	0.371	2.16	-0.191	2.30
12/23/2012	7:32:00	14.696	14.543	0.153	0.353	2.16	-0.173	2.08
12/23/2012	7:47:00	14.701	14.537	0.164	0.378	2.16	-0.198	2.38
12/23/2012	8:02:00	14.704	14.538	0.166	0.383	2.16	-0.203	2.44
12/23/2012	8:17:00	14.701	14.534	0.167	0.385	2.16	-0.205	2.46
12/23/2012	8:32:00	14.709	14.538	0.171	0.394	2.16	-0.214	2.57
12/23/2012	8:47:00	14.710	14.540	0.170	0.392	2.16	-0.212	2.55
12/23/2012	9:02:00	14.708	14.537	0.171	0.394	2.16	-0.214	2.57
12/23/2012	9:17:00	14.704	14.533	0.171	0.394	2.16	-0.214	2.57
12/23/2012	9:32:00	14.709	14.527	0.182	0.420	2.16	-0.240	2.88
12/23/2012	9:47:00	14.709	14.528	0.181	0.418	2.16	-0.238	2.85
12/23/2012	10:02:00	14.709	14.523	0.186	0.429	2.16	-0.249	2.99
12/23/2012	10:17:00	14.706	14.517	0.189	0.436	2.16	-0.256	3.07
12/23/2012	10:32:00	14.701	14.515	0.186	0.429	2.16	-0.249	2.99
12/23/2012	10:47:00	14.700	14.506	0.194	0.448	2.16	-0.268	3.21
12/23/2012	11:02:00	14.699	14.500	0.199	0.459	2.16	-0.279	3.35
12/23/2012	11:17:00	14.689	14.495	0.194	0.448	2.16	-0.268	3.21
12/23/2012	11:32:00	14.686	14.493	0.193	0.445	2.16	-0.265	3.18
12/23/2012	11:47:00	14.680	14.497	0.183	0.422	2.16	-0.242	2.91
12/23/2012	12:02:00	14.672	14.492	0.180	0.415	2.16	-0.235	2.82
12/23/2012	12:17:00	14.669	14.483	0.186	0.429	2.16	-0.249	2.99
12/23/2012	12:32:00	14.668	14.479	0.189	0.436	2.16	-0.256	3.07
12/23/2012	12:47:00	14.663	14.484	0.179	0.413	2.16	-0.233	2.80
12/23/2012	13:02:00	14.661	14.481	0.180	0.415	2.16	-0.235	2.82
12/23/2012	13:17:00	14.652	14.481	0.171	0.394	2.16	-0.214	2.57
12/23/2012	13:32:00	14.649	14.478	0.171	0.394	2.16	-0.214	2.57
12/23/2012	13:47:00	14.648	14.476	0.172	0.397	2.16	-0.217	2.60
12/23/2012	14:02:00	14.650	14.472	0.178	0.411	2.16	-0.231	2.77
12/23/2012	14:17:00	14.649	14.475	0.174	0.401	2.16	-0.221	2.66
12/23/2012	14:32:00	14.647	14.476	0.171	0.394	2.16	-0.214	2.57
12/23/2012	14:47:00	14.646	14.472	0.174	0.401	2.16	-0.221	2.66
12/23/2012	15:02:00	14.643	14.467	0.176	0.406	2.16	-0.226	2.71
12/23/2012	15:17:00	14.644	14.479	0.165	0.381	2.16	-0.201	2.41
12/23/2012	15:32:00	14.641	14.476	0.165	0.381	2.16	-0.201	2.41
12/23/2012	15:47:00	14.640	14.476	0.164	0.378	2.16	-0.198	2.38
12/23/2012	16:02:00	14.642	14.481	0.161	0.371	2.16	-0.191	2.30
12/23/2012	16:17:00	14.641	14.479	0.162	0.374	2.16	-0.194	2.32
12/23/2012	16:32:00	14.644	14.479	0.165	0.381	2.16	-0.201	2.41
12/23/2012	16:47:00	14.643	14.476	0.167	0.385	2.16	-0.205	2.46
12/23/2012	17:02:00	14.645	14.481	0.164	0.378	2.16	-0.198	2.38
12/23/2012	17:17:00	14.642	14.490	0.152	0.351	2.16	-0.171	2.05
12/23/2012	17:32:00	14.647	14.483	0.164	0.378	2.16	-0.198	2.38
12/23/2012	17:47:00	14.646	14.479	0.167	0.385	2.16	-0.205	2.46
12/23/2012	18:02:00	14.646	14.480	0.166	0.383	2.16	-0.203	2.44
12/23/2012	18:17:00	14.649	14.485	0.164	0.378	2.16	-0.198	2.38
12/23/2012	18:32:00	14.650	14.483	0.167	0.385	2.16	-0.205	2.46
12/23/2012	18:47:00	14.648	14.478	0.170	0.392	2.16	-0.212	2.55
12/23/2012	19:02:00	14.646	14.487	0.159	0.367	2.16	-0.187	2.24
12/23/2012	19:17:00	14.652	14.484	0.168	0.388	2.16	-0.208	2.49
12/23/2012	19:32:00	14.645	14.487	0.158	0.365	2.16	-0.185	2.21
12/23/2012	19:47:00	14.646	14.493	0.153	0.353	2.16	-0.173	2.08
12/23/2012	20:02:00	14.644	14.477	0.167	0.385	2.16	-0.205	2.46
12/23/2012	20:17:00	14.648	14.493	0.155	0.358	2.16	-0.178	2.13
12/23/2012	20:32:00	14.650	14.483	0.167	0.385	2.16	-0.205	2.46
12/23/2012	20:47:00	14.652	14.487	0.165	0.381	2.16	-0.201	2.41
12/23/2012	21:02:00	14.647	14.486	0.161	0.371	2.16	-0.191	2.30
12/23/2012	21:17:00	14.648	14.488	0.160	0.369	2.16	-0.189	2.27
12/23/2012	21:32:00	14.652	14.486	0.166	0.383	2.16	-0.203	2.44
12/23/2012	21:47:00	14.653	14.487	0.166	0.383	2.16	-0.203	2.44
12/23/2012	22:02:00	14.649	14.491	0.158	0.365	2.16	-0.185	2.21
12/23/2012	22:17:00	14.652	14.487	0.165	0.381	2.16	-0.201	2.41
12/23/2012	22:32:00	14.653	14.486	0.167	0.385	2.16	-0.205	2.46
12/23/2012	22:47:00	14.654	14.483	0.171	0.394	2.16	-0.214	2.57
12/23/2012	23:02:00	14.655	14.485	0.170	0.392	2.16	-0.212	2.55
12/23/2012	23:17:00	14.652	14.481	0.171	0.394	2.16	-0.214	2.57
12/23/2012	23:32:00	14.651	14.481	0.170	0.392	2.16	-0.212	2.55
12/23/2012	23:47:00	14.652	14.478	0.174	0.401	2.16	-0.221	2.66
12/24/2012	0:02:00	14.653	14.475	0.178	0.411	2.16	-0.231	2.77
12/24/2012	0:17:00	14.653	14.475	0.178	0.411	2.16	-0.231	2.77
12/24/2012	0:32:00	14.645	14.470	0.175	0.404	2.16	-0.224	2.68
12/24/2012	0:47:00	14.649	14.466	0.183	0.422	2.16	-0.242	2.91
12/24/2012	1:02:00	14.644	14.482	0.162	0.374	2.16	-0.194	2.32
12/24/2012	1:17:00	14.644	14.465	0.179	0.413	2.16	-0.233	2.80
12/24/2012	1:32:00	14.642	14.458	0.184	0.424	2.16	-0.244	2.93
12/24/2012	1:47:00	14.637	14.474	0.163	0.376	2.16	-0.196	2.35
12/24/2012	2:02:00	14.644	14.459	0.185	0.427	2.16	-0.247	2.96
12/24/2012	2:17:00	14.640	14.472	0.168	0.388	2.16	-0.208	2.49
12/24/2012	2:32:00	14.641	14.481	0.160	0.369	2.16	-0.189	2.27
12/24/2012	2:47:00	14.639	14.453	0.186	0.429	2.16	-0.249	2.99
12/24/2012	3:02:00	14.635	14.460	0.175	0.404	2.16	-0.224	2.68
12/24/2012	3:17:00	14.635	14.451	0.184	0.424	2.16	-0.244	2.93
12/24/2012	3:32:00	14.632	14.456	0.176	0.406	2.16	-0.226	2.71
12/24/2012	3:47:00	14.633	14.458	0.175	0.404	2.16	-0.224	2.68
12/24/2012	4:02:00	14.627	14.461	0.166	0.383	2.16	-0.203	2.44
12/24/2012	4:17:00	14.627	14.457	0.170	0.392	2.16	-0.212	2.55
12/24/2012	4:32:00	14.626	14.457	0.169	0.390	2.16	-0.210	2.52
12/24/2012	4:47:00	14.623	14.452	0.171	0.394	2.16	-0.214	2.57
12/24/2012	5:02:00	14.626	14.462	0.164	0.378	2.16	-0.198	2.38
12/24/2012	5:17:00	14.624	14.468	0.156	0.360	2.16	-0.180	2.16
12/24/2012	5:32:00	14.622	14.464	0.158	0.365	2.16	-0.185	2.21
12/24/2012	5:47:00	14.625	14.450	0.175	0.404	2.16	-0.224	2.68
12/24/2012	6:02:00	14.626	14.459	0.167	0.385	2.16	-0.205	2.46
12/24/2012	6:17:00	14.628	14.460	0.168	0.388	2.16	-0.208	2.49
12/24/2012	6:32:00	14.632	14.459	0.173	0.399	2.16	-0.219	2.63
12/24/2012	6:47:00	14.631	14.455	0.176	0.406	2.16	-0.226	2.71
12/24/2012	7:02:00	14.630	14.475	0.155	0.358	2.16	-0.178	2.13
12/24/2012	7:17:00	14.629	14.454	0.175	0.404	2.16	-0.224	2.68
12/24/2012	7:32:00	14.624	14.463	0.161	0.371	2.16	-0.191	2.30
12/24/2012	7:47:00	14.623	14.464	0.159	0.367	2.16	-0.187	2.24
12/24/2012	8:02:00	14.628	14.467	0.161	0.371	2.16	-0.191	2.30
12/24/2012	8:17:00	14.631	14.467	0.164	0.378	2.16	-0.198	2.38
12/24/2012	8:32:00	14.629	14.465	0.164	0.378	2.16	-0.198	2.38
12/24/2012	8:47:00	14.633	14.463	0.170	0.392	2.16	-0.212	2.55
12/24/2012	9:02:00	14.638	14.459	0.179	0.413	2.16	-0.233	2.80

12/24/2012	9:17:00	14.628	14.460	0.168	0.388	2.16	-0.208	2.49
12/24/2012	9:32:00	14.634	14.461	0.173	0.399	2.16	-0.219	2.63
12/24/2012	9:47:00	14.629	14.461	0.168	0.388	2.16	-0.208	2.49
12/24/2012	10:02:00	14.630	14.456	0.174	0.401	2.16	-0.221	2.66
12/24/2012	10:17:00	14.631	14.450	0.181	0.418	2.16	-0.238	2.85
12/24/2012	10:32:00	14.628	14.451	0.177	0.408	2.16	-0.228	2.74
12/24/2012	10:47:00	14.624	14.436	0.188	0.434	2.16	-0.254	3.04
12/24/2012	11:02:00	14.625	14.445	0.180	0.415	2.16	-0.235	2.82
12/24/2012	11:17:00	14.620	14.449	0.171	0.394	2.16	-0.214	2.57
12/24/2012	11:32:00	14.616	14.449	0.167	0.385	2.16	-0.205	2.46
12/24/2012	11:47:00	14.613	14.452	0.161	0.371	2.16	-0.191	2.30
12/24/2012	12:02:00	14.611	14.440	0.171	0.394	2.16	-0.214	2.57
12/24/2012	12:17:00	14.610	14.429	0.181	0.418	2.16	-0.238	2.85
12/24/2012	12:32:00	14.619	14.421	0.198	0.457	2.16	-0.277	3.32
12/24/2012	12:47:00	14.614	14.418	0.196	0.452	2.16	-0.272	3.27
12/24/2012	13:02:00	14.614	14.414	0.200	0.461	2.16	-0.281	3.38
12/24/2012	13:17:00	14.599	14.419	0.180	0.415	2.16	-0.235	2.82
12/24/2012	13:32:00	14.590	14.422	0.168	0.388	2.16	-0.208	2.49
12/24/2012	13:47:00	14.589	14.423	0.166	0.383	2.16	-0.203	2.44
12/24/2012	14:02:00	14.584	14.426	0.158	0.365	2.16	-0.185	2.21
12/24/2012	14:17:00	14.580	14.420	0.160	0.369	2.16	-0.189	2.27
12/24/2012	14:32:00	14.596	14.419	0.177	0.408	2.16	-0.228	2.74
12/24/2012	14:47:00	14.602	14.416	0.186	0.429	2.16	-0.249	2.99
12/24/2012	15:02:00	14.598	14.417	0.181	0.418	2.16	-0.238	2.85
12/24/2012	15:17:00	14.603	14.413	0.190	0.438	2.16	-0.258	3.10
12/24/2012	15:32:00	14.596	14.413	0.183	0.422	2.16	-0.242	2.91
12/24/2012	15:47:00	14.599	14.411	0.188	0.434	2.16	-0.254	3.04
12/24/2012	16:02:00	14.605	14.407	0.198	0.457	2.16	-0.277	3.32
12/24/2012	16:17:00	14.620	14.412	0.208	0.480	2.16	-0.300	3.60
12/24/2012	16:32:00	14.615	14.418	0.197	0.454	2.16	-0.274	3.29
12/24/2012	16:47:00	14.611	14.413	0.198	0.457	2.16	-0.277	3.32
12/24/2012	17:02:00	14.605	14.415	0.190	0.438	2.16	-0.258	3.10
12/24/2012	17:17:00	14.603	14.418	0.185	0.427	2.16	-0.247	2.96
12/24/2012	17:32:00	14.611	14.419	0.192	0.443	2.16	-0.263	3.16
12/24/2012	17:47:00	14.610	14.421	0.189	0.436	2.16	-0.256	3.07
12/24/2012	18:02:00	14.608	14.421	0.187	0.431	2.16	-0.251	3.02
12/24/2012	18:17:00	14.608	14.419	0.189	0.436	2.16	-0.256	3.07
12/24/2012	18:32:00	14.606	14.425	0.181	0.418	2.16	-0.238	2.85
12/24/2012	18:47:00	14.601	14.424	0.177	0.408	2.16	-0.228	2.74
12/24/2012	19:02:00	14.607	14.424	0.183	0.422	2.16	-0.242	2.91
12/24/2012	19:17:00	14.608	14.425	0.183	0.422	2.16	-0.242	2.91
12/24/2012	19:32:00	14.611	14.421	0.190	0.438	2.16	-0.258	3.10
12/24/2012	19:47:00	14.609	14.421	0.188	0.434	2.16	-0.254	3.04
12/24/2012	20:02:00	14.609	14.422	0.187	0.431	2.16	-0.251	3.02
12/24/2012	20:17:00	14.602	14.427	0.175	0.404	2.16	-0.224	2.68
12/24/2012	20:32:00	14.602	14.429	0.173	0.399	2.16	-0.219	2.63
12/24/2012	20:47:00	14.606	14.434	0.172	0.397	2.16	-0.217	2.60
12/24/2012	21:02:00	14.604	14.431	0.173	0.399	2.16	-0.219	2.63
12/24/2012	21:17:00	14.603	14.425	0.178	0.411	2.16	-0.231	2.77
12/24/2012	21:32:00	14.608	14.422	0.186	0.429	2.16	-0.249	2.99
12/24/2012	21:47:00	14.606	14.428	0.178	0.411	2.16	-0.231	2.77
12/24/2012	22:02:00	14.611	14.430	0.181	0.418	2.16	-0.238	2.85
12/24/2012	22:17:00	14.608	14.428	0.180	0.415	2.16	-0.235	2.82
12/24/2012	22:32:00	14.605	14.436	0.169	0.390	2.16	-0.210	2.52
12/24/2012	22:47:00	14.609	14.433	0.176	0.406	2.16	-0.226	2.71
12/24/2012	23:02:00	14.604	14.425	0.179	0.413	2.16	-0.233	2.80
12/24/2012	23:17:00	14.601	14.426	0.175	0.404	2.16	-0.224	2.68
12/24/2012	23:32:00	14.610	14.429	0.181	0.418	2.16	-0.238	2.85
12/24/2012	23:47:00	14.609	14.428	0.181	0.418	2.16	-0.238	2.85
12/25/2012	0:02:00	14.612	14.431	0.181	0.418	2.16	-0.238	2.85
12/25/2012	0:17:00	14.609	14.427	0.182	0.420	2.16	-0.240	2.88
12/25/2012	0:32:00	14.602	14.429	0.173	0.399	2.16	-0.219	2.63
12/25/2012	0:47:00	14.606	14.431	0.175	0.404	2.16	-0.224	2.68
12/25/2012	1:02:00	14.610	14.430	0.180	0.415	2.16	-0.235	2.82
12/25/2012	1:17:00	14.610	14.435	0.175	0.404	2.16	-0.224	2.68
12/25/2012	1:32:00	14.612	14.435	0.177	0.408	2.16	-0.228	2.74
12/25/2012	1:47:00	14.612	14.435	0.177	0.408	2.16	-0.228	2.74
12/25/2012	2:02:00	14.606	14.438	0.168	0.388	2.16	-0.208	2.49
12/25/2012	2:17:00	14.612	14.445	0.167	0.385	2.16	-0.205	2.46
12/25/2012	2:32:00	14.611	14.444	0.167	0.385	2.16	-0.205	2.46
12/25/2012	2:47:00	14.614	14.443	0.171	0.394	2.16	-0.214	2.57
12/25/2012	3:02:00	14.613	14.446	0.167	0.385	2.16	-0.205	2.46
12/25/2012	3:17:00	14.614	14.447	0.167	0.385	2.16	-0.205	2.46
12/25/2012	3:32:00	14.617	14.449	0.168	0.388	2.16	-0.208	2.49
12/25/2012	3:47:00	14.618	14.451	0.167	0.385	2.16	-0.205	2.46
12/25/2012	4:02:00	14.625	14.446	0.179	0.413	2.16	-0.233	2.80
12/25/2012	4:17:00	14.622	14.450	0.172	0.397	2.16	-0.217	2.60
12/25/2012	4:32:00	14.621	14.453	0.168	0.388	2.16	-0.208	2.49
12/25/2012	4:47:00	14.623	14.456	0.167	0.385	2.16	-0.205	2.46
12/25/2012	5:02:00	14.620	14.454	0.166	0.383	2.16	-0.203	2.44
12/25/2012	5:17:00	14.624	14.464	0.160	0.369	2.16	-0.189	2.27
12/25/2012	5:32:00	14.626	14.466	0.160	0.369	2.16	-0.189	2.27
12/25/2012	5:47:00	14.625	14.469	0.156	0.360	2.16	-0.180	2.16
12/25/2012	6:02:00	14.632	14.475	0.157	0.362	2.16	-0.182	2.19
12/25/2012	6:17:00	14.639	14.477	0.162	0.374	2.16	-0.194	2.32
12/25/2012	6:32:00	14.638	14.487	0.151	0.348	2.16	-0.168	2.02
12/25/2012	6:47:00	14.642	14.481	0.161	0.371	2.16	-0.191	2.30
12/25/2012	7:02:00	14.642	14.487	0.155	0.358	2.16	-0.178	2.13
12/25/2012	7:17:00	14.645	14.484	0.161	0.371	2.16	-0.191	2.30
12/25/2012	7:32:00	14.658	14.484	0.174	0.401	2.16	-0.221	2.66
12/25/2012	7:47:00	14.660	14.490	0.170	0.392	2.16	-0.212	2.55
12/25/2012	8:02:00	14.665	14.491	0.174	0.401	2.16	-0.221	2.66
12/25/2012	8:17:00	14.662	14.492	0.170	0.392	2.16	-0.212	2.55
12/25/2012	8:32:00	14.656	14.491	0.165	0.381	2.16	-0.201	2.41
12/25/2012	8:47:00	14.658	14.501	0.157	0.362	2.16	-0.182	2.19
12/25/2012	9:02:00	14.663	14.493	0.170	0.392	2.16	-0.212	2.55
12/25/2012	9:17:00	14.662	14.502	0.160	0.369	2.16	-0.189	2.27
12/25/2012	9:32:00	14.664	14.497	0.167	0.385	2.16	-0.205	2.46
12/25/2012	9:47:00	14.673	14.490	0.183	0.422	2.16	-0.242	2.91
12/25/2012	10:02:00	14.670	14.496	0.174	0.401	2.16	-0.221	2.66
12/25/2012	10:17:00	14.669	14.495	0.174	0.401	2.16	-0.221	2.66
12/25/2012	10:32:00	14.670	14.489	0.181	0.418	2.16	-0.238	2.85
12/25/2012	10:47:00	14.677	14.492	0.185	0.427	2.16	-0.247	2.96
12/25/2012	11:02:00	14.666	14.482	0.184	0.424	2.16	-0.244	2.93
12/25/2012	11:17:00	14.670	14.485	0.185	0.427	2.16	-0.247	2.96
12/25/2012	11:32:00	14.671	14.476	0.195	0.450	2.16	-0.270	3.24
12/25/2012	11:47:00	14.667	14.468	0.199	0.459	2.16	-0.279	3.35
12/25/2012	12:02:00	14.661	14.471	0.190	0.438	2.16	-0.258	3.10
12/25/2012	12:17:00	14.647	14.477	0.170	0.392	2.16	-0.212	2.55
12/25/2012	12:32:00	14.651	14.467	0.184	0.424	2.16	-0.244	2.93
12/25/2012	12:47:00	14.648	14.468	0.180	0.415	2.16	-0.235	2.82
12/25/2012	13:02:00	14.644	14.477	0.167	0.385	2.16	-0.205	2.46
12/25/2012	13:17:00	14.646	14.479	0.167	0.385	2.16	-0.205	2.46
12/25/2012	13:32:00	14.657	14.474	0.183	0.422	2.16	-0.242	2.91
12/25/2012	13:47:00	14.652	14.469	0.183	0.422	2.16	-0.242	2.91
12/25/2012	14:02:00	14.651	14.467	0.184	0.424	2.16	-0.244	2.93
12/25/2012	14:17:00	14.657	14.463	0.194	0.448	2.16	-0.268	3.21
12/25/2012	14:32:00	14.649	14.469	0.180	0.415	2.16	-0.235	2.82
12/25/2012	14:47:00	14.647	14.466	0.181	0.418	2.16	-0.238	2.85
12/25/2012	15:02:00	14.642	14.475	0.167	0.385	2.16	-0.205	2.46
12/25/2012	15:17:00	14.635	14.461	0.174	0.401	2.16	-0.221	2.66
12/25/2012	15:32:00	14.644	14.463	0.181	0.418	2.16	-0.238	2.85
12/25/2012	15:47:00	14.642	14.465	0.177	0.408	2.16	-0.228	2.74
12/25/2012	16:02:00	14.642	14.465	0.177	0.408	2.16	-0.228	2.74
12/25/2012	16:17:00	14.639	14.464	0.175	0.404	2.16	-0.224	2.68
12/25/2012	16:32:00	14.637	14.467	0.170	0.392	2.16	-0.212	2.55
12/25/2012	16:47:00	14.641	14.467	0.174	0.401	2.16	-0.221	2.66
12/25/2012	17:02:00	14.643	14.465	0.178	0.411	2.16	-0.231	2.77
12/25/2012	17:17:00	14.634	14.464	0.170	0.392	2.16	-0.212	2.55
12/25/2012	17:32:00	14.644	14.469	0.175	0.404	2.16	-0.224	2.68
12/25/2012	17:47:00	14.651	14.491	0.160	0.369	2.16	-0.189	2.27
12/25/2012	18:02:00	14.642	14.479	0.163	0.376	2.16	-0.196	2.35
12/25/2012	18:17:00	14.636	14.477	0.159	0.367	2.16	-0.187	2.24

12/25/2012	18:32:00	14.655	14.483	0.172	0.397	2.16	-0.217	2.60
12/25/2012	18:47:00	14.658	14.479	0.179	0.413	2.16	-0.233	2.80
12/25/2012	19:02:00	14.655	14.470	0.185	0.427	2.16	-0.247	2.96
12/25/2012	19:17:00	14.660	14.482	0.178	0.411	2.16	-0.231	2.77
12/25/2012	19:32:00	14.653	14.490	0.163	0.376	2.16	-0.196	2.35
12/25/2012	19:47:00	14.663	14.467	0.196	0.452	2.16	-0.272	3.27
12/25/2012	20:02:00	14.651	14.467	0.184	0.424	2.16	-0.244	2.93
12/25/2012	20:17:00	14.652	14.467	0.185	0.427	2.16	-0.247	2.96
12/25/2012	20:32:00	14.656	14.463	0.193	0.445	2.16	-0.265	3.18
12/25/2012	20:47:00	14.654	14.456	0.198	0.457	2.16	-0.277	3.32
12/25/2012	21:02:00	14.643	14.454	0.189	0.436	2.16	-0.256	3.07
12/25/2012	21:17:00	14.635	14.464	0.171	0.394	2.16	-0.214	2.57
12/25/2012	21:32:00	14.637	14.452	0.185	0.427	2.16	-0.247	2.96
12/25/2012	21:47:00	14.635	14.446	0.189	0.436	2.16	-0.256	3.07
12/25/2012	22:02:00	14.635	14.442	0.193	0.445	2.16	-0.265	3.18
12/25/2012	22:17:00	14.635	14.444	0.191	0.441	2.16	-0.261	3.13
12/25/2012	22:32:00	14.639	14.451	0.188	0.434	2.16	-0.254	3.04
12/25/2012	22:47:00	14.625	14.449	0.176	0.406	2.16	-0.226	2.71
12/25/2012	23:02:00	14.622	14.444	0.178	0.411	2.16	-0.231	2.77
12/25/2012	23:17:00	14.616	14.443	0.173	0.399	2.16	-0.219	2.63
12/25/2012	23:32:00	14.620	14.440	0.180	0.415	2.16	-0.235	2.82
12/25/2012	23:47:00	14.624	14.435	0.189	0.436	2.16	-0.256	3.07
12/26/2012	0:02:00	14.620	14.437	0.183	0.422	2.16	-0.242	2.91
12/26/2012	0:17:00	14.623	14.434	0.189	0.436	2.16	-0.256	3.07
12/26/2012	0:32:00	14.623	14.426	0.197	0.454	2.16	-0.274	3.29
12/26/2012	0:47:00	14.613	14.424	0.189	0.436	2.16	-0.256	3.07
12/26/2012	1:02:00	14.618	14.415	0.203	0.468	2.16	-0.288	3.46
12/26/2012	1:17:00	14.615	14.419	0.196	0.452	2.16	-0.272	3.27
12/26/2012	1:32:00	14.604	14.416	0.188	0.434	2.16	-0.254	3.04
12/26/2012	1:47:00	14.605	14.413	0.192	0.443	2.16	-0.263	3.16
12/26/2012	2:02:00	14.599	14.403	0.196	0.452	2.16	-0.272	3.27
12/26/2012	2:17:00	14.589	14.404	0.185	0.427	2.16	-0.247	2.96
12/26/2012	2:32:00	14.595	14.388	0.207	0.478	2.16	-0.298	3.57
12/26/2012	2:47:00	14.595	14.377	0.218	0.503	2.16	-0.323	3.88
12/26/2012	3:02:00	14.583	14.397	0.186	0.429	2.16	-0.249	2.99
12/26/2012	3:17:00	14.577	14.377	0.200	0.461	2.16	-0.281	3.38
12/26/2012	3:32:00	14.571	14.367	0.204	0.471	2.16	-0.291	3.49
12/26/2012	3:47:00	14.571	14.351	0.220	0.508	2.16	-0.328	3.93
12/26/2012	4:02:00	14.561	14.346	0.215	0.496	2.16	-0.316	3.79
12/26/2012	4:17:00	14.556	14.353	0.203	0.468	2.16	-0.288	3.46
12/26/2012	4:32:00	14.553	14.344	0.209	0.482	2.16	-0.302	3.63
12/26/2012	4:47:00	14.541	14.349	0.192	0.443	2.16	-0.263	3.16
12/26/2012	5:02:00	14.534	14.338	0.196	0.452	2.16	-0.272	3.27
12/26/2012	5:17:00	14.529	14.344	0.185	0.427	2.16	-0.247	2.96
12/26/2012	5:32:00	14.528	14.345	0.183	0.422	2.16	-0.242	2.91
12/26/2012	5:47:00	14.524	14.343	0.181	0.418	2.16	-0.238	2.85
12/26/2012	6:02:00	14.533	14.338	0.195	0.450	2.16	-0.270	3.24
12/26/2012	6:17:00	14.524	14.331	0.193	0.445	2.16	-0.265	3.18
12/26/2012	6:32:00	14.528	14.313	0.215	0.496	2.16	-0.316	3.79
12/26/2012	6:47:00	14.525	14.309	0.216	0.498	2.16	-0.318	3.82
12/26/2012	7:02:00	14.538	14.299	0.239	0.551	2.16	-0.371	4.46
12/26/2012	7:17:00	14.555	14.296	0.259	0.598	2.16	-0.418	5.01
12/26/2012	7:32:00	14.611	14.287	0.324	0.747	2.16	-0.567	6.81
12/26/2012	7:47:00	14.684	14.287	0.397	0.916	2.16	-0.736	8.83
12/26/2012	8:02:00	14.812	14.273	0.539	1.243	2.16	-1.063	12.76
12/26/2012	8:17:00	14.945	14.262	0.683	1.576	2.16	-1.396	16.75
12/26/2012	8:32:00	15.011	14.255	0.756	1.744	2.16	-1.564	18.77
12/26/2012	8:47:00	15.021	14.235	0.786	1.813	2.16	-1.633	19.60
12/26/2012	9:02:00	15.035	14.238	0.797	1.839	2.16	-1.659	19.90
12/26/2012	9:17:00	15.019	14.239	0.780	1.799	2.16	-1.619	19.43
12/26/2012	9:32:00	14.965	14.251	0.714	1.647	2.16	-1.467	17.61
12/26/2012	9:47:00	14.917	14.246	0.671	1.548	2.16	-1.368	16.42
12/26/2012	10:02:00	14.852	14.244	0.608	1.403	2.16	-1.223	14.67
12/26/2012	10:17:00	14.804	14.232	0.572	1.320	2.16	-1.140	13.68
12/26/2012	10:32:00	14.782	14.232	0.550	1.269	2.16	-1.089	13.07
12/26/2012	10:47:00	14.764	14.225	0.539	1.243	2.16	-1.063	12.76
12/26/2012	11:02:00	14.743	14.225	0.518	1.195	2.16	-1.015	12.18
12/26/2012	11:17:00	14.719	14.207	0.512	1.181	2.16	-1.001	12.01
12/26/2012	11:32:00	14.682	14.197	0.485	1.119	2.16	-0.939	11.27
12/26/2012	11:47:00	14.666	14.193	0.473	1.091	2.16	-0.911	10.93
12/26/2012	12:02:00	14.642	14.194	0.448	1.034	2.16	-0.854	10.24
12/26/2012	12:17:00	14.619	14.194	0.425	0.980	2.16	-0.800	9.61
12/26/2012	12:32:00	14.594	14.193	0.401	0.925	2.16	-0.745	8.94
12/26/2012	12:47:00	14.572	14.187	0.385	0.888	2.16	-0.708	8.50
12/26/2012	13:02:00	14.563	14.185	0.378	0.872	2.16	-0.692	8.30
12/26/2012	13:17:00	14.560	14.192	0.368	0.849	2.16	-0.669	8.03
12/26/2012	13:32:00	14.546	14.186	0.360	0.831	2.16	-0.651	7.81
12/26/2012	13:47:00	14.542	14.185	0.357	0.824	2.16	-0.644	7.72
12/26/2012	14:02:00	14.537	14.191	0.346	0.798	2.16	-0.618	7.42
12/26/2012	14:17:00	14.534	14.193	0.341	0.787	2.16	-0.607	7.28
12/26/2012	14:32:00	14.532	14.198	0.334	0.771	2.16	-0.591	7.09
12/26/2012	14:47:00	14.524	14.201	0.323	0.745	2.16	-0.565	6.78
12/26/2012	15:02:00	14.515	14.202	0.313	0.722	2.16	-0.542	6.51
12/26/2012	15:17:00	14.512	14.211	0.301	0.694	2.16	-0.514	6.17
12/26/2012	15:32:00	14.517	14.209	0.308	0.711	2.16	-0.531	6.37
12/26/2012	15:47:00	14.511	14.219	0.292	0.674	2.16	-0.494	5.92
12/26/2012	16:02:00	14.513	14.221	0.292	0.674	2.16	-0.494	5.92
12/26/2012	16:17:00	14.515	14.229	0.286	0.660	2.16	-0.480	5.76
12/26/2012	16:32:00	14.522	14.243	0.279	0.644	2.16	-0.464	5.56
12/26/2012	16:47:00	14.522	14.240	0.282	0.651	2.16	-0.471	5.65
12/26/2012	17:02:00	14.523	14.230	0.293	0.676	2.16	-0.496	5.95
12/26/2012	17:17:00	14.529	14.242	0.287	0.662	2.16	-0.482	5.79
12/26/2012	17:32:00	14.526	14.251	0.275	0.634	2.16	-0.454	5.45
12/26/2012	17:47:00	14.529	14.258	0.271	0.625	2.16	-0.445	5.34
12/26/2012	18:02:00	14.535	14.264	0.271	0.625	2.16	-0.445	5.34
12/26/2012	18:17:00	14.533	14.264	0.269	0.621	2.16	-0.441	5.29
12/26/2012	18:32:00	14.539	14.267	0.272	0.628	2.16	-0.448	5.37
12/26/2012	18:47:00	14.544	14.280	0.264	0.609	2.16	-0.429	5.15
12/26/2012	19:02:00	14.543	14.271	0.272	0.628	2.16	-0.448	5.37
12/26/2012	19:17:00	14.550	14.281	0.269	0.621	2.16	-0.441	5.29
12/26/2012	19:32:00	14.548	14.280	0.268	0.618	2.16	-0.438	5.26
12/26/2012	19:47:00	14.551	14.292	0.259	0.598	2.16	-0.418	5.01
12/26/2012	20:02:00	14.547	14.284	0.263	0.607	2.16	-0.427	5.12
12/26/2012	20:17:00	14.547	14.293	0.254	0.586	2.16	-0.406	4.87
12/26/2012	20:32:00	14.550	14.283	0.267	0.616	2.16	-0.436	5.23
12/26/2012	20:47:00	14.550	14.303	0.247	0.570	2.16	-0.390	4.68
12/26/2012	21:02:00	14.552	14.304	0.248	0.572	2.16	-0.392	4.71
12/26/2012	21:17:00	14.547	14.298	0.249	0.574	2.16	-0.394	4.73
12/26/2012	21:32:00	14.548	14.310	0.238	0.549	2.16	-0.369	4.43
12/26/2012	21:47:00	14.555	14.316	0.239	0.551	2.16	-0.371	4.46
12/26/2012	22:02:00	14.552	14.313	0.239	0.551	2.16	-0.371	4.46
12/26/2012	22:17:00	14.559	14.317	0.242	0.558	2.16	-0.378	4.54
12/26/2012	22:32:00	14.560	14.311	0.249	0.574	2.16	-0.394	4.73
12/26/2012	22:47:00	14.560	14.335	0.225	0.519	2.16	-0.339	4.07
12/26/2012	23:02:00	14.563	14.330	0.233	0.538	2.16	-0.358	4.29
12/26/2012	23:17:00	14.564	14.313	0.251	0.579	2.16	-0.399	4.79
12/26/2012	23:32:00	14.571	14.334	0.237	0.547	2.16	-0.367	4.40
12/26/2012	23:47:00	14.567	14.336	0.231	0.533	2.16	-0.353	4.24
12/27/2012	0:02:00	14.567	14.325	0.242	0.558	2.16	-0.378	4.54
12/27/2012	0:17:00	14.567	14.328	0.239	0.551	2.16	-0.371	4.46
12/27/2012	0:32:00	14.566	14.346	0.220	0.508	2.16	-0.328	3.93
12/27/2012	0:47:00	14.569	14.322	0.247	0.570	2.16	-0.390	4.68
12/27/2012	1:02:00	14.564	14.336	0.228	0.526	2.16	-0.346	4.15
12/27/2012	1:17:00	14.571	14.357	0.214	0.494	2.16	-0.314	3.76
12/27/2012	1:32:00	14.569	14.342	0.227	0.524	2.16	-0.344	4.12
12/27/2012	1:47:00	14.568	14.346	0.222	0.512	2.16	-0.332	3.99
12/27/2012	2:02:00	14.576	14.351	0.225	0.519	2.16	-0.339	4.07
12/27/2012	2:17:00	14.581	14.350	0.231	0.533	2.16	-0.353	4.24
12/27/2012	2:32:00	14.582	14.344	0.238	0.549	2.16	-0.369	4.43
12/27/2012	2:47:00	14.588	14.351	0.237	0.547	2.16	-0.367	4.40
12/27/2012	3:02:00	14.588	14.367	0.221	0.510	2.16	-0.330	3.96
12/27/2012	3:17:00	14.587	14.369	0.218	0.503	2.16	-0.323	3.88
12/27/2012	3:32:00	14.587	14.366	0.221	0.510	2.16	-0.330	3.96

12/27/2012	3:47:00	14.588	14.354	0.234	0.540	2.16	-0.360	4.32
12/27/2012	4:02:00	14.587	14.359	0.228	0.526	2.16	-0.346	4.15
12/27/2012	4:17:00	14.590	14.372	0.218	0.503	2.16	-0.323	3.88
12/27/2012	4:32:00	14.596	14.376	0.220	0.508	2.16	-0.328	3.93
12/27/2012	4:47:00	14.590	14.365	0.225	0.519	2.16	-0.339	4.07
12/27/2012	5:02:00	14.588	14.365	0.223	0.514	2.16	-0.334	4.01
12/27/2012	5:17:00	14.596	14.373	0.223	0.514	2.16	-0.334	4.01
12/27/2012	5:32:00	14.595	14.375	0.220	0.508	2.16	-0.328	3.93
12/27/2012	5:47:00	14.600	14.385	0.215	0.496	2.16	-0.316	3.79
12/27/2012	6:02:00	14.602	14.392	0.210	0.484	2.16	-0.304	3.65
12/27/2012	6:17:00	14.604	14.400	0.204	0.471	2.16	-0.291	3.49
12/27/2012	6:32:00	14.604	14.402	0.202	0.466	2.16	-0.286	3.43
12/27/2012	6:47:00	14.614	14.409	0.205	0.473	2.16	-0.293	3.52
12/27/2012	7:02:00	14.621	14.408	0.213	0.491	2.16	-0.311	3.74
12/27/2012	7:17:00	14.620	14.411	0.209	0.482	2.16	-0.302	3.63
12/27/2012	7:32:00	14.623	14.412	0.211	0.487	2.16	-0.307	3.68
12/27/2012	7:47:00	14.623	14.411	0.212	0.489	2.16	-0.309	3.71
12/27/2012	8:02:00	14.631	14.419	0.212	0.489	2.16	-0.309	3.71
12/27/2012	8:17:00	14.632	14.415	0.217	0.501	2.16	-0.321	3.85
12/27/2012	8:32:00	14.635	14.433	0.202	0.466	2.16	-0.286	3.43
12/27/2012	8:47:00	14.634	14.420	0.214	0.494	2.16	-0.314	3.76
12/27/2012	9:02:00	14.641	14.433	0.208	0.480	2.16	-0.300	3.60
12/27/2012	9:17:00	14.647	14.436	0.211	0.487	2.16	-0.307	3.68
12/27/2012	9:32:00	14.652	14.434	0.218	0.503	2.16	-0.323	3.88
12/27/2012	9:47:00	14.655	14.434	0.221	0.510	2.16	-0.330	3.96
12/27/2012	10:02:00	14.652	14.436	0.216	0.498	2.16	-0.318	3.82
12/27/2012	10:17:00	14.657	14.441	0.216	0.498	2.16	-0.318	3.82
12/27/2012	10:32:00	14.660	14.435	0.225	0.519	2.16	-0.339	4.07
12/27/2012	10:47:00	14.659	14.438	0.221	0.510	2.16	-0.330	3.96
12/27/2012	11:02:00	14.659	14.433	0.226	0.521	2.16	-0.341	4.10
12/27/2012	11:17:00	14.662	14.433	0.229	0.528	2.16	-0.348	4.18
12/27/2012	11:32:00	14.664	14.434	0.230	0.531	2.16	-0.351	4.21
12/27/2012	11:47:00	14.663	14.435	0.228	0.526	2.16	-0.346	4.15
12/27/2012	12:02:00	14.659	14.432	0.227	0.524	2.16	-0.344	4.12
12/27/2012	12:17:00	14.656	14.430	0.226	0.521	2.16	-0.341	4.10
12/27/2012	12:32:00	14.656	14.428	0.228	0.526	2.16	-0.346	4.15
12/27/2012	12:47:00	14.655	14.428	0.227	0.524	2.16	-0.344	4.12
12/27/2012	13:02:00	14.648	14.427	0.221	0.510	2.16	-0.330	3.96
12/27/2012	13:17:00	14.657	14.434	0.223	0.514	2.16	-0.334	4.01
12/27/2012	13:32:00	14.650	14.436	0.214	0.494	2.16	-0.314	3.76
12/27/2012	13:47:00	14.645	14.435	0.210	0.484	2.16	-0.304	3.65
12/27/2012	14:02:00	14.653	14.435	0.218	0.503	2.16	-0.323	3.88
12/27/2012	14:17:00	14.656	14.434	0.222	0.512	2.16	-0.332	3.99
12/27/2012	14:32:00	14.657	14.440	0.217	0.501	2.16	-0.321	3.85
12/27/2012	14:47:00	14.655	14.436	0.219	0.505	2.16	-0.325	3.90
12/27/2012	15:02:00	14.651	14.442	0.209	0.482	2.16	-0.302	3.63
12/27/2012	15:17:00	14.650	14.441	0.209	0.482	2.16	-0.302	3.63
12/27/2012	15:32:00	14.654	14.442	0.212	0.489	2.16	-0.309	3.71
12/27/2012	15:47:00	14.659	14.447	0.212	0.489	2.16	-0.309	3.71
12/27/2012	16:02:00	14.659	14.448	0.211	0.487	2.16	-0.307	3.68
12/27/2012	16:17:00	14.657	14.463	0.194	0.448	2.16	-0.268	3.21
12/27/2012	16:32:00	14.657	14.460	0.197	0.454	2.16	-0.274	3.29
12/27/2012	16:47:00	14.660	14.461	0.199	0.459	2.16	-0.279	3.35
12/27/2012	17:02:00	14.664	14.462	0.202	0.466	2.16	-0.286	3.43
12/27/2012	17:17:00	14.666	14.465	0.201	0.464	2.16	-0.284	3.40
12/27/2012	17:32:00	14.674	14.473	0.201	0.464	2.16	-0.284	3.40
12/27/2012	17:47:00	14.676	14.484	0.192	0.443	2.16	-0.263	3.16
12/27/2012	18:02:00	14.672	14.469	0.203	0.468	2.16	-0.288	3.46
12/27/2012	18:17:00	14.677	14.475	0.202	0.466	2.16	-0.286	3.43
12/27/2012	18:32:00	14.679	14.478	0.201	0.464	2.16	-0.284	3.40
12/27/2012	18:47:00	14.682	14.474	0.208	0.480	2.16	-0.300	3.60
12/27/2012	19:02:00	14.679	14.473	0.206	0.475	2.16	-0.295	3.54
12/27/2012	19:17:00	14.684	14.474	0.210	0.484	2.16	-0.304	3.65
12/27/2012	19:32:00	14.683	14.478	0.205	0.473	2.16	-0.293	3.52
12/27/2012	19:47:00	14.682	14.476	0.206	0.475	2.16	-0.295	3.54
12/27/2012	20:02:00	14.684	14.482	0.202	0.466	2.16	-0.286	3.43
12/27/2012	20:17:00	14.690	14.481	0.209	0.482	2.16	-0.302	3.63
12/27/2012	20:32:00	14.688	14.483	0.205	0.473	2.16	-0.293	3.52
12/27/2012	20:47:00	14.690	14.486	0.204	0.471	2.16	-0.291	3.49
12/27/2012	21:02:00	14.693	14.484	0.209	0.482	2.16	-0.302	3.63
12/27/2012	21:17:00	14.690	14.491	0.199	0.459	2.16	-0.279	3.35
12/27/2012	21:32:00	14.689	14.490	0.199	0.459	2.16	-0.279	3.35
12/27/2012	21:47:00	14.688	14.501	0.187	0.431	2.16	-0.251	3.02
12/27/2012	22:02:00	14.691	14.491	0.200	0.461	2.16	-0.281	3.38
12/27/2012	22:17:00	14.691	14.499	0.192	0.443	2.16	-0.263	3.16
12/27/2012	22:32:00	14.696	14.497	0.199	0.459	2.16	-0.279	3.35
12/27/2012	22:47:00	14.698	14.504	0.194	0.448	2.16	-0.268	3.21
12/27/2012	23:02:00	14.698	14.498	0.200	0.461	2.16	-0.281	3.38
12/27/2012	23:17:00	14.703	14.497	0.206	0.475	2.16	-0.295	3.54
12/27/2012	23:32:00	14.701	14.497	0.204	0.471	2.16	-0.291	3.49
12/27/2012	23:47:00	14.705	14.496	0.209	0.482	2.16	-0.302	3.63
12/28/2012	0:02:00	14.702	14.498	0.204	0.471	2.16	-0.291	3.49
12/28/2012	0:17:00	14.699	14.497	0.202	0.466	2.16	-0.286	3.43
12/28/2012	0:32:00	14.699	14.495	0.204	0.471	2.16	-0.291	3.49
12/28/2012	0:47:00	14.701	14.495	0.206	0.475	2.16	-0.295	3.54
12/28/2012	1:02:00	14.699	14.506	0.193	0.445	2.16	-0.265	3.18
12/28/2012	1:17:00	14.704	14.499	0.205	0.473	2.16	-0.293	3.52
12/28/2012	1:32:00	14.698	14.503	0.195	0.450	2.16	-0.270	3.24
12/28/2012	1:47:00	14.694	14.502	0.192	0.443	2.16	-0.263	3.16
12/28/2012	2:02:00	14.699	14.507	0.192	0.443	2.16	-0.263	3.16
12/28/2012	2:17:00	14.700	14.505	0.195	0.450	2.16	-0.270	3.24
12/28/2012	2:32:00	14.700	14.507	0.193	0.445	2.16	-0.265	3.18
12/28/2012	2:47:00	14.698	14.509	0.189	0.436	2.16	-0.256	3.07
12/28/2012	3:02:00	14.702	14.510	0.192	0.443	2.16	-0.263	3.16
12/28/2012	3:17:00	14.705	14.511	0.194	0.448	2.16	-0.268	3.21
12/28/2012	3:32:00	14.708	14.514	0.194	0.448	2.16	-0.268	3.21
12/28/2012	3:47:00	14.710	14.508	0.202	0.466	2.16	-0.286	3.43
12/28/2012	4:02:00	14.710	14.514	0.196	0.452	2.16	-0.272	3.27
12/28/2012	4:17:00	14.710	14.521	0.189	0.436	2.16	-0.256	3.07
12/28/2012	4:32:00	14.706	14.515	0.191	0.441	2.16	-0.261	3.13
12/28/2012	4:47:00	14.703	14.523	0.180	0.415	2.16	-0.235	2.82
12/28/2012	5:02:00	14.711	14.523	0.188	0.434	2.16	-0.254	3.04
12/28/2012	5:17:00	14.713	14.522	0.191	0.441	2.16	-0.261	3.13
12/28/2012	5:32:00	14.716	14.523	0.193	0.445	2.16	-0.265	3.18
12/28/2012	5:47:00	14.717	14.529	0.188	0.434	2.16	-0.254	3.04
12/28/2012	6:02:00	14.722	14.532	0.190	0.438	2.16	-0.258	3.10
12/28/2012	6:17:00	14.722	14.527	0.195	0.450	2.16	-0.270	3.24
12/28/2012	6:32:00	14.720	14.525	0.195	0.450	2.16	-0.270	3.24
12/28/2012	6:47:00	14.720	14.530	0.190	0.438	2.16	-0.258	3.10
12/28/2012	7:02:00	14.721	14.538	0.183	0.422	2.16	-0.242	2.91
12/28/2012	7:17:00	14.724	14.531	0.193	0.445	2.16	-0.265	3.18
12/28/2012	7:32:00	14.718	14.530	0.188	0.434	2.16	-0.254	3.04
12/28/2012	7:47:00	14.725	14.545	0.180	0.415	2.16	-0.235	2.82
12/28/2012	8:02:00	14.732	14.540	0.192	0.443	2.16	-0.263	3.16
12/28/2012	8:17:00	14.728	14.546	0.182	0.420	2.16	-0.240	2.88
12/28/2012	8:32:00	14.730	14.541	0.189	0.436	2.16	-0.256	3.07
12/28/2012	8:47:00	14.734	14.543	0.191	0.441	2.16	-0.261	3.13
12/28/2012	9:02:00	14.737	14.538	0.199	0.459	2.16	-0.279	3.35
12/28/2012	9:17:00	14.736	14.540	0.196	0.452	2.16	-0.272	3.27
12/28/2012	9:32:00	14.741	14.544	0.197	0.454	2.16	-0.274	3.29
12/28/2012	9:47:00	14.733	14.544	0.189	0.436	2.16	-0.256	3.07
12/28/2012	10:02:00	14.731	14.539	0.192	0.443	2.16	-0.263	3.16
12/28/2012	10:17:00	14.738	14.538	0.200	0.461	2.16	-0.281	3.38
12/28/2012	10:32:00	14.739	14.538	0.201	0.464	2.16	-0.284	3.40
12/28/2012	10:47:00	14.738	14.527	0.211	0.487	2.16	-0.307	3.68
12/28/2012	11:02:00	14.741	14.520	0.221	0.510	2.16	-0.330	3.96
12/28/2012	11:17:00	14.734	14.518	0.216	0.498	2.16	-0.318	3.82
12/28/2012	11:32:00	14.733	14.511	0.222	0.512	2.16	-0.332	3.99
12/28/2012	11:47:00	14.729	14.505	0.224	0.517	2.16	-0.337	4.04
12/28/2012	12:02:00	14.719	14.501	0.218	0.503	2.16	-0.323	3.88
12/28/2012	12:17:00	14.714	14.496	0.218	0.503	2.16	-0.323	3.88
12/28/2012	12:32:00	14.712	14.501	0.211	0.487	2.16	-0.307	3.68
12/28/2012	12:47:00	14.701	14.495	0.206	0.475	2.16	-0.295	3.54

12/28/2012	13:02:00	14.707	14.499	0.208	0.480	2.16	-0.300	3.60
12/28/2012	13:17:00	14.699	14.493	0.206	0.475	2.16	-0.295	3.54
12/28/2012	13:32:00	14.700	14.494	0.206	0.475	2.16	-0.295	3.54
12/28/2012	13:47:00	14.697	14.487	0.210	0.484	2.16	-0.304	3.65
12/28/2012	14:02:00	14.695	14.493	0.202	0.466	2.16	-0.286	3.43
12/28/2012	14:17:00	14.689	14.482	0.207	0.478	2.16	-0.298	3.57
12/28/2012	14:32:00	14.694	14.476	0.218	0.503	2.16	-0.323	3.88
12/28/2012	14:47:00	14.687	14.479	0.208	0.480	2.16	-0.300	3.60
12/28/2012	15:02:00	14.686	14.480	0.206	0.475	2.16	-0.295	3.54
12/28/2012	15:17:00	14.689	14.481	0.208	0.480	2.16	-0.300	3.60
12/28/2012	15:32:00	14.675	14.473	0.202	0.466	2.16	-0.286	3.43
12/28/2012	15:47:00	14.670	14.476	0.194	0.448	2.16	-0.268	3.21
12/28/2012	16:02:00	14.680	14.477	0.203	0.468	2.16	-0.288	3.46
12/28/2012	16:17:00	14.673	14.471	0.202	0.466	2.16	-0.286	3.43
12/28/2012	16:32:00	14.679	14.474	0.205	0.473	2.16	-0.293	3.52
12/28/2012	16:47:00	14.671	14.471	0.200	0.461	2.16	-0.281	3.38
12/28/2012	17:02:00	14.677	14.482	0.195	0.450	2.16	-0.270	3.24
12/28/2012	17:17:00	14.670	14.468	0.202	0.466	2.16	-0.286	3.43
12/28/2012	17:32:00	14.682	14.465	0.217	0.501	2.16	-0.321	3.85
12/28/2012	17:47:00	14.675	14.466	0.209	0.482	2.16	-0.302	3.63
12/28/2012	18:02:00	14.673	14.458	0.215	0.496	2.16	-0.316	3.79
12/28/2012	18:17:00	14.670	14.481	0.189	0.436	2.16	-0.256	3.07
12/28/2012	18:32:00	14.671	14.463	0.208	0.480	2.16	-0.300	3.60
12/28/2012	18:47:00	14.668	14.485	0.183	0.422	2.16	-0.242	2.91
12/28/2012	19:02:00	14.666	14.488	0.178	0.411	2.16	-0.231	2.77
12/28/2012	19:17:00	14.674	14.474	0.200	0.461	2.16	-0.281	3.38
12/28/2012	19:32:00	14.677	14.487	0.190	0.438	2.16	-0.258	3.10
12/28/2012	19:47:00	14.674	14.477	0.197	0.454	2.16	-0.274	3.29
12/28/2012	20:02:00	14.675	14.455	0.220	0.508	2.16	-0.328	3.93
12/28/2012	20:17:00	14.672	14.471	0.201	0.464	2.16	-0.284	3.40
12/28/2012	20:32:00	14.673	14.458	0.215	0.496	2.16	-0.316	3.79
12/28/2012	20:47:00	14.675	14.465	0.210	0.484	2.16	-0.304	3.65
12/28/2012	21:02:00	14.675	14.468	0.207	0.478	2.16	-0.298	3.57
12/28/2012	21:17:00	14.666	14.454	0.212	0.489	2.16	-0.309	3.71
12/28/2012	21:32:00	14.664	14.446	0.218	0.503	2.16	-0.323	3.88
12/28/2012	21:47:00	14.661	14.443	0.218	0.503	2.16	-0.323	3.88
12/28/2012	22:02:00	14.663	14.461	0.202	0.466	2.16	-0.286	3.43
12/28/2012	22:17:00	14.661	14.458	0.203	0.468	2.16	-0.288	3.46
12/28/2012	22:32:00	14.653	14.442	0.211	0.487	2.16	-0.307	3.68
12/28/2012	22:47:00	14.651	14.447	0.204	0.471	2.16	-0.291	3.49
12/28/2012	23:02:00	14.647	14.432	0.215	0.496	2.16	-0.316	3.79
12/28/2012	23:17:00	14.636	14.414	0.222	0.512	2.16	-0.332	3.99
12/28/2012	23:32:00	14.641	14.424	0.217	0.501	2.16	-0.321	3.85
12/28/2012	23:47:00	14.638	14.434	0.204	0.471	2.16	-0.291	3.49
12/29/2012	0:02:00	14.630	14.438	0.192	0.443	2.16	-0.263	3.16
12/29/2012	0:17:00	14.626	14.428	0.198	0.457	2.16	-0.277	3.32
12/29/2012	0:32:00	14.623	14.443	0.180	0.415	2.16	-0.235	2.82
12/29/2012	0:47:00	14.619	14.427	0.192	0.443	2.16	-0.263	3.16
12/29/2012	1:02:00	14.624	14.428	0.196	0.452	2.16	-0.272	3.27
12/29/2012	1:17:00	14.626	14.420	0.206	0.475	2.16	-0.295	3.54
12/29/2012	1:32:00	14.617	14.407	0.210	0.484	2.16	-0.304	3.65
12/29/2012	1:47:00	14.622	14.406	0.216	0.498	2.16	-0.318	3.82
12/29/2012	2:02:00	14.622	14.409	0.213	0.491	2.16	-0.311	3.74
12/29/2012	2:17:00	14.617	14.411	0.206	0.475	2.16	-0.295	3.54
12/29/2012	2:32:00	14.607	14.396	0.211	0.487	2.16	-0.307	3.68
12/29/2012	2:47:00	14.602	14.392	0.210	0.484	2.16	-0.304	3.65
12/29/2012	3:02:00	14.606	14.387	0.219	0.505	2.16	-0.325	3.90
12/29/2012	3:17:00	14.618	14.391	0.227	0.524	2.16	-0.344	4.12
12/29/2012	3:32:00	14.625	14.374	0.251	0.579	2.16	-0.399	4.79
12/29/2012	3:47:00	14.678	14.359	0.319	0.736	2.16	-0.556	6.67
12/29/2012	4:02:00	14.738	14.351	0.387	0.893	2.16	-0.713	8.55
12/29/2012	4:17:00	14.815	14.341	0.474	1.094	2.16	-0.914	10.96
12/29/2012	4:32:00	14.898	14.333	0.565	1.303	2.16	-1.123	13.48
12/29/2012	4:47:00	14.999	14.334	0.665	1.534	2.16	-1.354	16.25
12/29/2012	5:02:00	15.056	14.342	0.714	1.647	2.16	-1.467	17.61
12/29/2012	5:17:00	15.036	14.338	0.698	1.610	2.16	-1.430	17.16
12/29/2012	5:32:00	14.977	14.338	0.639	1.474	2.16	-1.294	15.53
12/29/2012	5:47:00	14.913	14.326	0.587	1.354	2.16	-1.174	14.09
12/29/2012	6:02:00	14.845	14.329	0.516	1.190	2.16	-1.010	12.12
12/29/2012	6:17:00	14.799	14.328	0.471	1.087	2.16	-0.907	10.88
12/29/2012	6:32:00	14.762	14.332	0.430	0.992	2.16	-0.812	9.74
12/29/2012	6:47:00	14.732	14.349	0.383	0.884	2.16	-0.704	8.44
12/29/2012	7:02:00	14.717	14.349	0.368	0.849	2.16	-0.669	8.03
12/29/2012	7:17:00	14.693	14.356	0.337	0.777	2.16	-0.597	7.17
12/29/2012	7:32:00	14.693	14.359	0.334	0.771	2.16	-0.591	7.09
12/29/2012	7:47:00	14.687	14.350	0.337	0.777	2.16	-0.597	7.17
12/29/2012	8:02:00	14.684	14.354	0.330	0.761	2.16	-0.581	6.98
12/29/2012	8:17:00	14.682	14.350	0.332	0.766	2.16	-0.586	7.03
12/29/2012	8:32:00	14.681	14.347	0.334	0.771	2.16	-0.591	7.09
12/29/2012	8:47:00	14.680	14.363	0.317	0.731	2.16	-0.551	6.62
12/29/2012	9:02:00	14.673	14.349	0.324	0.747	2.16	-0.567	6.81
12/29/2012	9:17:00	14.674	14.348	0.326	0.752	2.16	-0.572	6.86
12/29/2012	9:32:00	14.664	14.341	0.323	0.745	2.16	-0.565	6.78
12/29/2012	9:47:00	14.663	14.342	0.321	0.741	2.16	-0.561	6.73
12/29/2012	10:02:00	14.657	14.343	0.314	0.724	2.16	-0.544	6.53
12/29/2012	10:17:00	14.651	14.336	0.315	0.727	2.16	-0.547	6.56
12/29/2012	10:32:00	14.647	14.336	0.311	0.717	2.16	-0.537	6.45
12/29/2012	10:47:00	14.641	14.333	0.308	0.711	2.16	-0.531	6.37
12/29/2012	11:02:00	14.640	14.331	0.309	0.713	2.16	-0.533	6.39
12/29/2012	11:17:00	14.640	14.332	0.308	0.711	2.16	-0.531	6.37
12/29/2012	11:32:00	14.636	14.337	0.299	0.690	2.16	-0.510	6.12
12/29/2012	11:47:00	14.627	14.332	0.295	0.681	2.16	-0.501	6.01
12/29/2012	12:02:00	14.624	14.331	0.293	0.676	2.16	-0.496	5.95
12/29/2012	12:17:00	14.618	14.330	0.288	0.664	2.16	-0.484	5.81
12/29/2012	12:32:00	14.620	14.328	0.292	0.674	2.16	-0.494	5.92
12/29/2012	12:47:00	14.621	14.323	0.298	0.687	2.16	-0.507	6.09
12/29/2012	13:02:00	14.616	14.331	0.285	0.657	2.16	-0.477	5.73
12/29/2012	13:17:00	14.612	14.328	0.284	0.655	2.16	-0.475	5.70
12/29/2012	13:32:00	14.611	14.334	0.277	0.639	2.16	-0.459	5.51
12/29/2012	13:47:00	14.603	14.330	0.273	0.630	2.16	-0.450	5.40
12/29/2012	14:02:00	14.610	14.334	0.276	0.637	2.16	-0.457	5.48
12/29/2012	14:17:00	14.606	14.336	0.270	0.623	2.16	-0.443	5.31
12/29/2012	14:32:00	14.599	14.338	0.261	0.602	2.16	-0.422	5.07
12/29/2012	14:47:00	14.603	14.341	0.262	0.604	2.16	-0.424	5.09
12/29/2012	15:02:00	14.604	14.340	0.264	0.609	2.16	-0.429	5.15
12/29/2012	15:17:00	14.604	14.345	0.259	0.598	2.16	-0.418	5.01
12/29/2012	15:32:00	14.607	14.345	0.262	0.604	2.16	-0.424	5.09
12/29/2012	15:47:00	14.604	14.351	0.253	0.584	2.16	-0.404	4.84
12/29/2012	16:02:00	14.608	14.349	0.259	0.598	2.16	-0.418	5.01
12/29/2012	16:17:00	14.608	14.354	0.254	0.586	2.16	-0.406	4.87
12/29/2012	16:32:00	14.608	14.351	0.257	0.593	2.16	-0.413	4.95
12/29/2012	16:47:00	14.611	14.360	0.251	0.579	2.16	-0.399	4.79
12/29/2012	17:02:00	14.608	14.359	0.249	0.574	2.16	-0.394	4.73
12/29/2012	17:17:00	14.611	14.363	0.248	0.572	2.16	-0.392	4.71
12/29/2012	17:32:00	14.613	14.374	0.239	0.551	2.16	-0.371	4.46
12/29/2012	17:47:00	14.610	14.378	0.232	0.535	2.16	-0.355	4.26
12/29/2012	18:02:00	14.613	14.380	0.233	0.538	2.16	-0.358	4.29
12/29/2012	18:17:00	14.615	14.388	0.227	0.524	2.16	-0.344	4.12
12/29/2012	18:32:00	14.621	14.396	0.225	0.519	2.16	-0.339	4.07
12/29/2012	18:47:00	14.627	14.395	0.232	0.535	2.16	-0.355	4.26
12/29/2012	19:02:00	14.633	14.397	0.236	0.544	2.16	-0.364	4.37
12/29/2012	19:17:00	14.633	14.403	0.230	0.531	2.16	-0.351	4.21
12/29/2012	19:32:00	14.637	14.413	0.224	0.517	2.16	-0.337	4.04
12/29/2012	19:47:00	14.644	14.398	0.246	0.568	2.16	-0.388	4.65
12/29/2012	20:02:00	14.649	14.440	0.209	0.482	2.16	-0.302	3.63
12/29/2012	20:17:00	14.647	14.433	0.214	0.494	2.16	-0.314	3.76
12/29/2012	20:32:00	14.653	14.427	0.226	0.521	2.16	-0.341	4.10
12/29/2012	20:47:00	14.659	14.432	0.227	0.524	2.16	-0.344	4.12
12/29/2012	21:02:00	14.662	14.435	0.227	0.524	2.16	-0.344	4.12
12/29/2012	21:17:00	14.670	14.439	0.231	0.533	2.16	-0.353	4.24
12/29/2012	21:32:00	14.671	14.443	0.228	0.526	2.16	-0.346	4.15
12/29/2012	21:47:00	14.674	14.456	0.218	0.503	2.16	-0.323	3.88
12/29/2012	22:02:00	14.679	14.460	0.219	0.505	2.16	-0.325	3.90

12/29/2012	22:17:00	14.679	14.466	0.213	0.491	2.16	-0.311	3.74
12/29/2012	22:32:00	14.686	14.472	0.214	0.494	2.16	-0.314	3.76
12/29/2012	22:47:00	14.684	14.463	0.221	0.510	2.16	-0.330	3.96
12/29/2012	23:02:00	14.693	14.459	0.234	0.540	2.16	-0.360	4.32
12/29/2012	23:17:00	14.702	14.473	0.229	0.528	2.16	-0.348	4.18
12/29/2012	23:32:00	14.707	14.466	0.241	0.556	2.16	-0.376	4.51
12/29/2012	23:47:00	14.706	14.464	0.242	0.558	2.16	-0.378	4.54
12/30/2012	0:02:00	14.706	14.466	0.240	0.554	2.16	-0.374	4.48
12/30/2012	0:17:00	14.711	14.496	0.215	0.496	2.16	-0.316	3.79
12/30/2012	0:32:00	14.714	14.486	0.228	0.526	2.16	-0.346	4.15
12/30/2012	0:47:00	14.715	14.488	0.227	0.524	2.16	-0.344	4.12
12/30/2012	1:02:00	14.711	14.505	0.206	0.475	2.16	-0.295	3.54
12/30/2012	1:17:00	14.721	14.495	0.226	0.521	2.16	-0.341	4.10
12/30/2012	1:32:00	14.717	14.502	0.215	0.496	2.16	-0.316	3.79
12/30/2012	1:47:00	14.723	14.491	0.232	0.535	2.16	-0.355	4.26
12/30/2012	2:02:00	14.729	14.502	0.227	0.524	2.16	-0.344	4.12
12/30/2012	2:17:00	14.732	14.517	0.215	0.496	2.16	-0.316	3.79
12/30/2012	2:32:00	14.733	14.525	0.208	0.480	2.16	-0.300	3.60
12/30/2012	2:47:00	14.735	14.506	0.229	0.528	2.16	-0.348	4.18
12/30/2012	3:02:00	14.738	14.526	0.212	0.489	2.16	-0.309	3.71
12/30/2012	3:17:00	14.741	14.529	0.212	0.489	2.16	-0.309	3.71
12/30/2012	3:32:00	14.748	14.520	0.228	0.526	2.16	-0.346	4.15
12/30/2012	3:47:00	14.749	14.530	0.219	0.505	2.16	-0.325	3.90
12/30/2012	4:02:00	14.748	14.530	0.218	0.503	2.16	-0.323	3.88
12/30/2012	4:17:00	14.759	14.532	0.227	0.524	2.16	-0.344	4.12
12/30/2012	4:32:00	14.753	14.543	0.210	0.484	2.16	-0.304	3.65
12/30/2012	4:47:00	14.759	14.546	0.213	0.491	2.16	-0.311	3.74
12/30/2012	5:02:00	14.755	14.550	0.205	0.473	2.16	-0.293	3.52
12/30/2012	5:17:00	14.761	14.564	0.197	0.454	2.16	-0.274	3.29
12/30/2012	5:32:00	14.766	14.569	0.197	0.454	2.16	-0.274	3.29
12/30/2012	5:47:00	14.766	14.574	0.192	0.443	2.16	-0.263	3.16
12/30/2012	6:02:00	14.776	14.574	0.202	0.466	2.16	-0.286	3.43
12/30/2012	6:17:00	14.786	14.585	0.201	0.464	2.16	-0.284	3.40
12/30/2012	6:32:00	14.792	14.590	0.202	0.466	2.16	-0.286	3.43
12/30/2012	6:47:00	14.791	14.597	0.194	0.448	2.16	-0.268	3.21
12/30/2012	7:02:00	14.800	14.593	0.207	0.478	2.16	-0.298	3.57
12/30/2012	7:17:00	14.803	14.599	0.204	0.471	2.16	-0.291	3.49
12/30/2012	7:32:00	14.806	14.608	0.198	0.457	2.16	-0.277	3.32
12/30/2012	7:47:00	14.814	14.603	0.211	0.487	2.16	-0.307	3.68
12/30/2012	8:02:00	14.819	14.615	0.204	0.471	2.16	-0.291	3.49
12/30/2012	8:17:00	14.821	14.613	0.208	0.480	2.16	-0.300	3.60
12/30/2012	8:32:00	14.824	14.622	0.202	0.466	2.16	-0.286	3.43
12/30/2012	8:47:00	14.829	14.628	0.201	0.464	2.16	-0.284	3.40
12/30/2012	9:02:00	14.835	14.628	0.207	0.478	2.16	-0.298	3.57
12/30/2012	9:17:00	14.844	14.629	0.215	0.496	2.16	-0.316	3.79
12/30/2012	9:32:00	14.843	14.638	0.205	0.473	2.16	-0.293	3.52
12/30/2012	9:47:00	14.846	14.633	0.213	0.491	2.16	-0.311	3.74
12/30/2012	10:02:00	14.851	14.630	0.221	0.510	2.16	-0.330	3.96
12/30/2012	10:17:00	14.853	14.629	0.224	0.517	2.16	-0.337	4.04
12/30/2012	10:32:00	14.856	14.627	0.229	0.528	2.16	-0.348	4.18
12/30/2012	10:47:00	14.857	14.627	0.230	0.531	2.16	-0.351	4.21
12/30/2012	11:02:00	14.853	14.630	0.223	0.514	2.16	-0.334	4.01
12/30/2012	11:17:00	14.855	14.629	0.226	0.521	2.16	-0.341	4.10
12/30/2012	11:32:00	14.857	14.628	0.229	0.528	2.16	-0.348	4.18
12/30/2012	11:47:00	14.853	14.626	0.227	0.524	2.16	-0.344	4.12
12/30/2012	12:02:00	14.853	14.620	0.233	0.538	2.16	-0.358	4.29
12/30/2012	12:17:00	14.850	14.624	0.226	0.521	2.16	-0.341	4.10
12/30/2012	12:32:00	14.848	14.616	0.232	0.535	2.16	-0.355	4.26
12/30/2012	12:47:00	14.848	14.617	0.231	0.533	2.16	-0.353	4.24
12/30/2012	13:02:00	14.844	14.618	0.226	0.521	2.16	-0.341	4.10
12/30/2012	13:17:00	14.846	14.619	0.227	0.524	2.16	-0.344	4.12
12/30/2012	13:32:00	14.849	14.620	0.229	0.528	2.16	-0.348	4.18
12/30/2012	13:47:00	14.841	14.617	0.224	0.517	2.16	-0.337	4.04
12/30/2012	14:02:00	14.830	14.614	0.216	0.498	2.16	-0.318	3.82
12/30/2012	14:17:00	14.842	14.618	0.224	0.517	2.16	-0.337	4.04
12/30/2012	14:32:00	14.843	14.619	0.224	0.517	2.16	-0.337	4.04
12/30/2012	14:47:00	14.839	14.622	0.217	0.501	2.16	-0.321	3.85
12/30/2012	15:02:00	14.836	14.619	0.217	0.501	2.16	-0.321	3.85
12/30/2012	15:17:00	14.836	14.620	0.216	0.498	2.16	-0.318	3.82
12/30/2012	15:32:00	14.836	14.625	0.211	0.487	2.16	-0.307	3.68
12/30/2012	15:47:00	14.842	14.621	0.221	0.510	2.16	-0.330	3.96
12/30/2012	16:02:00	14.841	14.621	0.220	0.508	2.16	-0.328	3.93
12/30/2012	16:17:00	14.846	14.626	0.220	0.508	2.16	-0.328	3.93
12/30/2012	16:32:00	14.838	14.622	0.216	0.498	2.16	-0.318	3.82
12/30/2012	16:47:00	14.842	14.625	0.217	0.501	2.16	-0.321	3.85
12/30/2012	17:02:00	14.842	14.636	0.206	0.475	2.16	-0.295	3.54
12/30/2012	17:17:00	14.845	14.629	0.216	0.498	2.16	-0.318	3.82
12/30/2012	17:32:00	14.839	14.638	0.201	0.464	2.16	-0.284	3.40
12/30/2012	17:47:00	14.838	14.649	0.189	0.436	2.16	-0.256	3.07
12/30/2012	18:02:00	14.849	14.658	0.191	0.441	2.16	-0.261	3.13
12/30/2012	18:17:00	14.848	14.648	0.200	0.461	2.16	-0.281	3.38
12/30/2012	18:32:00	14.850	14.642	0.208	0.480	2.16	-0.300	3.60
12/30/2012	18:47:00	14.842	14.641	0.201	0.464	2.16	-0.284	3.40
12/30/2012	19:02:00	14.854	14.653	0.201	0.464	2.16	-0.284	3.40
12/30/2012	19:17:00	14.861	14.645	0.216	0.498	2.16	-0.318	3.82
12/30/2012	19:32:00	14.858	14.650	0.208	0.480	2.16	-0.300	3.60
12/30/2012	19:47:00	14.857	14.652	0.205	0.473	2.16	-0.293	3.52
12/30/2012	20:02:00	14.857	14.647	0.210	0.484	2.16	-0.304	3.65
12/30/2012	20:17:00	14.860	14.648	0.212	0.489	2.16	-0.309	3.71
12/30/2012	20:32:00	14.858	14.657	0.201	0.464	2.16	-0.284	3.40
12/30/2012	20:47:00	14.859	14.654	0.205	0.473	2.16	-0.293	3.52
12/30/2012	21:02:00	14.857	14.647	0.210	0.484	2.16	-0.304	3.65
12/30/2012	21:17:00	14.857	14.652	0.205	0.473	2.16	-0.293	3.52
12/30/2012	21:32:00	14.856	14.646	0.210	0.484	2.16	-0.304	3.65
12/30/2012	21:47:00	14.861	14.649	0.212	0.489	2.16	-0.309	3.71
12/30/2012	22:02:00	14.863	14.643	0.220	0.508	2.16	-0.328	3.93
12/30/2012	22:17:00	14.864	14.649	0.215	0.496	2.16	-0.316	3.79
12/30/2012	22:32:00	14.861	14.633	0.228	0.526	2.16	-0.346	4.15
12/30/2012	22:47:00	14.853	14.644	0.209	0.482	2.16	-0.302	3.63
12/30/2012	23:02:00	14.855	14.633	0.222	0.512	2.16	-0.332	3.99
12/30/2012	23:17:00	14.855	14.645	0.210	0.484	2.16	-0.304	3.65
12/30/2012	23:32:00	14.848	14.644	0.204	0.471	2.16	-0.291	3.49
12/30/2012	23:47:00	14.850	14.640	0.210	0.484	2.16	-0.304	3.65
12/31/2012	0:02:00	14.841	14.635	0.206	0.475	2.16	-0.295	3.54
12/31/2012	0:17:00	14.847	14.638	0.209	0.482	2.16	-0.302	3.63
12/31/2012	0:32:00	14.846	14.631	0.215	0.496	2.16	-0.316	3.79
12/31/2012	0:47:00	14.850	14.629	0.221	0.510	2.16	-0.330	3.96
12/31/2012	1:02:00	14.841	14.621	0.220	0.508	2.16	-0.328	3.93
12/31/2012	1:17:00	14.840	14.627	0.213	0.491	2.16	-0.311	3.74
12/31/2012	1:32:00	14.831	14.630	0.201	0.464	2.16	-0.284	3.40
12/31/2012	1:47:00	14.839	14.637	0.202	0.466	2.16	-0.286	3.43
12/31/2012	2:02:00	14.832	14.633	0.199	0.459	2.16	-0.279	3.35
12/31/2012	2:17:00	14.833	14.627	0.206	0.475	2.16	-0.295	3.54
12/31/2012	2:32:00	14.838	14.633	0.205	0.473	2.16	-0.293	3.52
12/31/2012	2:47:00	14.836	14.637	0.199	0.459	2.16	-0.279	3.35
12/31/2012	3:02:00	14.840	14.630	0.210	0.484	2.16	-0.304	3.65
12/31/2012	3:17:00	14.846	14.629	0.217	0.501	2.16	-0.321	3.85
12/31/2012	3:32:00	14.842	14.635	0.207	0.478	2.16	-0.298	3.57
12/31/2012	3:47:00	14.840	14.641	0.199	0.459	2.16	-0.279	3.35
12/31/2012	4:02:00	14.840	14.638	0.202	0.466	2.16	-0.286	3.43
12/31/2012	4:17:00	14.841	14.628	0.213	0.491	2.16	-0.311	3.74
12/31/2012	4:32:00	14.841	14.625	0.216	0.498	2.16	-0.318	3.82
12/31/2012	4:47:00	14.839	14.638	0.201	0.464	2.16	-0.284	3.40
12/31/2012	5:02:00	14.837	14.631	0.206	0.475	2.16	-0.295	3.54
12/31/2012	5:17:00	14.843	14.631	0.212	0.489	2.16	-0.309	3.71
12/31/2012	5:32:00	14.843	14.639	0.204	0.471	2.16	-0.291	3.49
12/31/2012	5:47:00	14.837	14.640	0.197	0.454	2.16	-0.274	3.29
12/31/2012	6:02:00	14.834	14.626	0.208	0.480	2.16	-0.300	3.60
12/31/2012	6:17:00	14.840	14.645	0.195	0.450	2.16	-0.270	3.24
12/31/2012	6:32:00	14.843	14.636	0.207	0.478	2.16	-0.298	3.57
12/31/2012	6:47:00	14.839	14.648	0.191	0.441	2.16	-0.261	3.13
12/31/2012	7:02:00	14.838	14.633	0.205	0.473	2.16	-0.293	3.52
12/31/2012	7:17:00	14.835	14.641	0.194	0.448	2.16	-0.268	3.21

12/31/2012	7:32:00	14.832	14.646	0.186	0.429	2.16	-0.249	2.99
12/31/2012	7:47:00	14.841	14.648	0.193	0.445	2.16	-0.265	3.18
12/31/2012	8:02:00	14.839	14.645	0.194	0.448	2.16	-0.268	3.21
12/31/2012	8:17:00	14.840	14.637	0.203	0.468	2.16	-0.288	3.46
12/31/2012	8:32:00	14.843	14.636	0.207	0.478	2.16	-0.298	3.57
12/31/2012	8:47:00	14.838	14.634	0.204	0.471	2.16	-0.291	3.49
12/31/2012	9:02:00	14.843	14.629	0.214	0.494	2.16	-0.314	3.76
12/31/2012	9:17:00	14.844	14.627	0.217	0.501	2.16	-0.321	3.85
12/31/2012	9:32:00	14.839	14.626	0.213	0.491	2.16	-0.311	3.74
12/31/2012	9:47:00	14.835	14.624	0.211	0.487	2.16	-0.307	3.68
12/31/2012	10:02:00	14.832	14.625	0.207	0.478	2.16	-0.298	3.57
12/31/2012	10:17:00	14.833	14.615	0.218	0.503	2.16	-0.323	3.88
12/31/2012	10:32:00	14.831	14.615	0.216	0.498	2.16	-0.318	3.82
12/31/2012	10:47:00	14.832	14.601	0.231	0.533	2.16	-0.353	4.24
12/31/2012	11:02:00	14.835	14.597	0.238	0.549	2.16	-0.369	4.43
12/31/2012	11:17:00	14.826	14.588	0.238	0.549	2.16	-0.369	4.43
12/31/2012	11:32:00	14.823	14.586	0.237	0.547	2.16	-0.367	4.40
12/31/2012	11:47:00	14.815	14.588	0.227	0.524	2.16	-0.344	4.12
12/31/2012	12:02:00	14.804	14.592	0.212	0.489	2.16	-0.309	3.71
12/31/2012	12:17:00	14.796	14.585	0.211	0.487	2.16	-0.307	3.68
12/31/2012	12:32:00	14.791	14.581	0.210	0.484	2.16	-0.304	3.65
12/31/2012	12:47:00	14.789	14.567	0.222	0.512	2.16	-0.332	3.99
12/31/2012	13:02:00	14.791	14.563	0.228	0.526	2.16	-0.346	4.15
12/31/2012	13:17:00	14.791	14.563	0.228	0.526	2.16	-0.346	4.15
12/31/2012	13:32:00	14.787	14.569	0.218	0.503	2.16	-0.323	3.88
12/31/2012	13:47:00	14.790	14.564	0.226	0.521	2.16	-0.341	4.10
12/31/2012	14:02:00	14.770	14.563	0.207	0.478	2.16	-0.298	3.57
12/31/2012	14:17:00	14.771	14.560	0.211	0.487	2.16	-0.307	3.68
12/31/2012	14:32:00	14.773	14.565	0.208	0.480	2.16	-0.300	3.60
12/31/2012	14:47:00	14.769	14.559	0.210	0.484	2.16	-0.304	3.65
12/31/2012	15:02:00	14.765	14.558	0.207	0.478	2.16	-0.298	3.57
12/31/2012	15:17:00	14.763	14.553	0.210	0.484	2.16	-0.304	3.65
12/31/2012	15:32:00	14.766	14.552	0.214	0.494	2.16	-0.314	3.76
12/31/2012	15:47:00	14.769	14.558	0.211	0.487	2.16	-0.307	3.68
12/31/2012	16:02:00	14.762	14.547	0.215	0.496	2.16	-0.316	3.79
12/31/2012	16:17:00	14.762	14.548	0.214	0.494	2.16	-0.314	3.76
12/31/2012	16:32:00	14.758	14.549	0.209	0.482	2.16	-0.302	3.63
12/31/2012	16:47:00	14.761	14.550	0.211	0.487	2.16	-0.307	3.68
12/31/2012	17:02:00	14.756	14.555	0.201	0.464	2.16	-0.284	3.40
12/31/2012	17:17:00	14.752	14.555	0.197	0.454	2.16	-0.274	3.29
12/31/2012	17:32:00	14.757	14.558	0.199	0.459	2.16	-0.279	3.35
12/31/2012	17:47:00	14.751	14.555	0.196	0.452	2.16	-0.272	3.27
12/31/2012	18:02:00	14.753	14.553	0.200	0.461	2.16	-0.281	3.38
12/31/2012	18:17:00	14.751	14.549	0.202	0.466	2.16	-0.286	3.43
12/31/2012	18:32:00	14.757	14.547	0.210	0.484	2.16	-0.304	3.65
12/31/2012	18:47:00	14.757	14.551	0.206	0.475	2.16	-0.295	3.54
12/31/2012	19:02:00	14.755	14.550	0.205	0.473	2.16	-0.293	3.52
12/31/2012	19:17:00	14.753	14.543	0.210	0.484	2.16	-0.304	3.65
12/31/2012	19:32:00	14.749	14.537	0.212	0.489	2.16	-0.309	3.71
12/31/2012	19:47:00	14.749	14.539	0.210	0.484	2.16	-0.304	3.65
12/31/2012	20:02:00	14.746	14.536	0.210	0.484	2.16	-0.304	3.65
12/31/2012	20:17:00	14.749	14.539	0.210	0.484	2.16	-0.304	3.65
12/31/2012	20:32:00	14.738	14.533	0.205	0.473	2.16	-0.293	3.52
12/31/2012	20:47:00	14.738	14.527	0.211	0.487	2.16	-0.307	3.68
12/31/2012	21:02:00	14.737	14.531	0.206	0.475	2.16	-0.295	3.54
12/31/2012	21:17:00	14.736	14.527	0.209	0.482	2.16	-0.302	3.63
12/31/2012	21:32:00	14.731	14.531	0.200	0.461	2.16	-0.281	3.38
12/31/2012	21:47:00	14.727	14.532	0.195	0.450	2.16	-0.270	3.24
12/31/2012	22:02:00	14.733	14.527	0.206	0.475	2.16	-0.295	3.54
12/31/2012	22:17:00	14.729	14.523	0.206	0.475	2.16	-0.295	3.54
12/31/2012	22:32:00	14.730	14.524	0.206	0.475	2.16	-0.295	3.54
12/31/2012	22:47:00	14.735	14.526	0.209	0.482	2.16	-0.302	3.63
12/31/2012	23:02:00	14.726	14.520	0.206	0.475	2.16	-0.295	3.54
12/31/2012	23:17:00	14.728	14.516	0.212	0.489	2.16	-0.309	3.71
12/31/2012	23:32:00	14.725	14.508	0.217	0.501	2.16	-0.321	3.85
12/31/2012	23:47:00	14.718	14.509	0.209	0.482	2.16	-0.302	3.63
1/1/2013	0:02:00	14.716	14.510	0.206	0.475	2.16	-0.295	3.54
1/1/2013	0:17:00	14.714	14.503	0.211	0.487	2.16	-0.307	3.68
1/1/2013	0:32:00	14.707	14.498	0.209	0.482	2.16	-0.302	3.63
1/1/2013	0:47:00	14.707	14.488	0.219	0.505	2.16	-0.325	3.90
1/1/2013	1:02:00	14.701	14.491	0.210	0.484	2.16	-0.304	3.65
1/1/2013	1:17:00	14.697	14.492	0.205	0.473	2.16	-0.293	3.52
1/1/2013	1:32:00	14.697	14.491	0.206	0.475	2.16	-0.295	3.54
1/1/2013	1:47:00	14.687	14.492	0.195	0.450	2.16	-0.270	3.24
1/1/2013	2:02:00	14.685	14.490	0.195	0.450	2.16	-0.270	3.24
1/1/2013	2:17:00	14.684	14.487	0.197	0.454	2.16	-0.274	3.29
1/1/2013	2:32:00	14.688	14.487	0.201	0.464	2.16	-0.284	3.40
1/1/2013	2:47:00	14.685	14.490	0.195	0.450	2.16	-0.270	3.24
1/1/2013	3:02:00	14.682	14.496	0.186	0.429	2.16	-0.249	2.99
1/1/2013	3:17:00	14.685	14.486	0.199	0.459	2.16	-0.279	3.35
1/1/2013	3:32:00	14.682	14.487	0.195	0.450	2.16	-0.270	3.24
1/1/2013	3:47:00	14.684	14.488	0.196	0.452	2.16	-0.272	3.27
1/1/2013	4:02:00	14.688	14.483	0.205	0.473	2.16	-0.293	3.52
1/1/2013	4:17:00	14.683	14.489	0.194	0.448	2.16	-0.268	3.21
1/1/2013	4:32:00	14.678	14.486	0.192	0.443	2.16	-0.263	3.16
1/1/2013	4:47:00	14.682	14.485	0.197	0.454	2.16	-0.274	3.29
1/1/2013	5:02:00	14.675	14.487	0.188	0.434	2.16	-0.254	3.04
1/1/2013	5:17:00	14.677	14.489	0.188	0.434	2.16	-0.254	3.04
1/1/2013	5:32:00	14.681	14.491	0.190	0.438	2.16	-0.258	3.10
1/1/2013	5:47:00	14.671	14.491	0.180	0.415	2.16	-0.235	2.82
1/1/2013	6:02:00	14.680	14.494	0.186	0.429	2.16	-0.249	2.99
1/1/2013	6:17:00	14.679	14.495	0.184	0.424	2.16	-0.244	2.93
1/1/2013	6:32:00	14.685	14.497	0.188	0.434	2.16	-0.254	3.04
1/1/2013	6:47:00	14.679	14.503	0.176	0.406	2.16	-0.226	2.71
1/1/2013	7:02:00	14.679	14.502	0.177	0.408	2.16	-0.228	2.74
1/1/2013	7:17:00	14.685	14.501	0.184	0.424	2.16	-0.244	2.93
1/1/2013	7:32:00	14.688	14.508	0.180	0.415	2.16	-0.235	2.82
1/1/2013	7:47:00	14.693	14.507	0.186	0.429	2.16	-0.249	2.99
1/1/2013	8:02:00	14.697	14.506	0.191	0.441	2.16	-0.261	3.13
1/1/2013	8:17:00	14.694	14.504	0.190	0.438	2.16	-0.258	3.10
1/1/2013	8:32:00	14.697	14.511	0.186	0.429	2.16	-0.249	2.99
1/1/2013	8:47:00	14.693	14.513	0.180	0.415	2.16	-0.235	2.82
1/1/2013	9:02:00	14.705	14.513	0.192	0.443	2.16	-0.263	3.16
1/1/2013	9:17:00	14.696	14.509	0.187	0.431	2.16	-0.251	3.02
1/1/2013	9:32:00	14.702	14.504	0.198	0.457	2.16	-0.277	3.32
1/1/2013	9:47:00	14.707	14.497	0.210	0.484	2.16	-0.304	3.65
1/1/2013	10:02:00	14.704	14.502	0.202	0.466	2.16	-0.286	3.43
1/1/2013	10:17:00	14.702	14.501	0.201	0.464	2.16	-0.284	3.40
1/1/2013	10:32:00	14.697	14.497	0.200	0.461	2.16	-0.281	3.38
1/1/2013	10:47:00	14.696	14.496	0.200	0.461	2.16	-0.281	3.38
1/1/2013	11:02:00	14.692	14.490	0.202	0.466	2.16	-0.286	3.43
1/1/2013	11:17:00	14.689	14.480	0.209	0.482	2.16	-0.302	3.63
1/1/2013	11:32:00	14.687	14.476	0.211	0.487	2.16	-0.307	3.68
1/1/2013	11:47:00	14.684	14.476	0.208	0.480	2.16	-0.300	3.60
1/1/2013	12:02:00	14.687	14.463	0.224	0.517	2.16	-0.337	4.04
1/1/2013	12:17:00	14.676	14.469	0.207	0.478	2.16	-0.298	3.57
1/1/2013	12:32:00	14.672	14.467	0.205	0.473	2.16	-0.293	3.52
1/1/2013	12:47:00	14.677	14.461	0.216	0.498	2.16	-0.318	3.82
1/1/2013	13:02:00	14.670	14.458	0.212	0.489	2.16	-0.309	3.71
1/1/2013	13:17:00	14.661	14.455	0.206	0.475	2.16	-0.295	3.54
1/1/2013	13:32:00	14.659	14.460	0.199	0.459	2.16	-0.279	3.35
1/1/2013	13:47:00	14.658	14.457	0.201	0.464	2.16	-0.284	3.40
1/1/2013	14:02:00	14.655	14.451	0.204	0.471	2.16	-0.291	3.49
1/1/2013	14:17:00	14.652	14.452	0.200	0.461	2.16	-0.281	3.38
1/1/2013	14:32:00	14.659	14.445	0.214	0.494	2.16	-0.314	3.76
1/1/2013	14:47:00	14.657	14.444	0.213	0.491	2.16	-0.311	3.74
1/1/2013	15:02:00	14.647	14.457	0.190	0.438	2.16	-0.258	3.10
1/1/2013	15:17:00	14.645	14.451	0.194	0.448	2.16	-0.268	3.21
1/1/2013	15:32:00	14.642	14.447	0.195	0.450	2.16	-0.270	3.24
1/1/2013	15:47:00	14.652	14.454	0.198	0.457	2.16	-0.277	3.32
1/1/2013	16:02:00	14.648	14.459	0.189	0.436	2.16	-0.256	3.07
1/1/2013	16:17:00	14.652	14.461	0.191	0.441	2.16	-0.261	3.13
1/1/2013	16:32:00	14.654	14.460	0.194	0.448	2.16	-0.268	3.21

1/1/2013	16:47:00	14.654	14.452	0.202	0.466	2.16	-0.286	3.43
1/1/2013	17:02:00	14.648	14.457	0.191	0.441	2.16	-0.261	3.13
1/1/2013	17:17:00	14.664	14.455	0.209	0.482	2.16	-0.302	3.63
1/1/2013	17:32:00	14.666	14.453	0.213	0.491	2.16	-0.311	3.74
1/1/2013	17:47:00	14.680	14.455	0.225	0.519	2.16	-0.339	4.07
1/1/2013	18:02:00	14.687	14.450	0.237	0.547	2.16	-0.367	4.40
1/1/2013	18:17:00	14.696	14.448	0.248	0.572	2.16	-0.392	4.71
1/1/2013	18:32:00	14.695	14.438	0.257	0.593	2.16	-0.413	4.95
1/1/2013	18:47:00	14.706	14.443	0.263	0.607	2.16	-0.427	5.12
1/1/2013	19:02:00	14.705	14.440	0.265	0.611	2.16	-0.431	5.18
1/1/2013	19:17:00	14.704	14.440	0.264	0.609	2.16	-0.429	5.15
1/1/2013	19:32:00	14.699	14.443	0.256	0.591	2.16	-0.411	4.93
1/1/2013	19:47:00	14.688	14.444	0.244	0.563	2.16	-0.383	4.59
1/1/2013	20:02:00	14.690	14.447	0.243	0.561	2.16	-0.381	4.57
1/1/2013	20:17:00	14.688	14.447	0.241	0.556	2.16	-0.376	4.51
1/1/2013	20:32:00	14.689	14.440	0.249	0.574	2.16	-0.394	4.73
1/1/2013	20:47:00	14.694	14.429	0.265	0.611	2.16	-0.431	5.18
1/1/2013	21:02:00	14.702	14.432	0.270	0.623	2.16	-0.443	5.31
1/1/2013	21:17:00	14.703	14.436	0.267	0.616	2.16	-0.436	5.23
1/1/2013	21:32:00	14.718	14.434	0.284	0.655	2.16	-0.475	5.70
1/1/2013	21:47:00	14.717	14.436	0.281	0.648	2.16	-0.468	5.62
1/1/2013	22:02:00	14.722	14.434	0.288	0.664	2.16	-0.484	5.81
1/1/2013	22:17:00	14.731	14.434	0.297	0.685	2.16	-0.505	6.06
1/1/2013	22:32:00	14.732	14.425	0.307	0.708	2.16	-0.528	6.34
1/1/2013	22:47:00	14.732	14.421	0.311	0.717	2.16	-0.537	6.45
1/1/2013	23:02:00	14.729	14.425	0.304	0.701	2.16	-0.521	6.26
1/1/2013	23:17:00	14.734	14.425	0.309	0.713	2.16	-0.533	6.39
1/1/2013	23:32:00	14.724	14.423	0.301	0.694	2.16	-0.514	6.17
1/1/2013	23:47:00	14.717	14.423	0.294	0.678	2.16	-0.498	5.98
1/2/2013	0:02:00	14.720	14.419	0.301	0.694	2.16	-0.514	6.17
1/2/2013	0:17:00	14.722	14.417	0.305	0.704	2.16	-0.524	6.28
1/2/2013	0:32:00	14.726	14.411	0.315	0.727	2.16	-0.547	6.56
1/2/2013	0:47:00	14.727	14.418	0.309	0.713	2.16	-0.533	6.39
1/2/2013	1:02:00	14.742	14.423	0.319	0.736	2.16	-0.556	6.67
1/2/2013	1:17:00	14.755	14.417	0.338	0.780	2.16	-0.600	7.20
1/2/2013	1:32:00	14.770	14.422	0.348	0.803	2.16	-0.623	7.47
1/2/2013	1:47:00	14.786	14.425	0.361	0.833	2.16	-0.653	7.83
1/2/2013	2:02:00	14.802	14.427	0.375	0.865	2.16	-0.685	8.22
1/2/2013	2:17:00	14.817	14.414	0.403	0.930	2.16	-0.750	9.00
1/2/2013	2:32:00	14.820	14.392	0.428	0.987	2.16	-0.807	9.69
1/2/2013	2:47:00	14.841	14.411	0.430	0.992	2.16	-0.812	9.74
1/2/2013	3:02:00	14.841	14.419	0.422	0.974	2.16	-0.794	9.52
1/2/2013	3:17:00	14.830	14.424	0.406	0.937	2.16	-0.757	9.08
1/2/2013	3:32:00	14.812	14.417	0.395	0.911	2.16	-0.731	8.78
1/2/2013	3:47:00	14.791	14.419	0.372	0.858	2.16	-0.678	8.14
1/2/2013	4:02:00	14.800	14.423	0.377	0.870	2.16	-0.690	8.28
1/2/2013	4:17:00	14.797	14.423	0.374	0.863	2.16	-0.683	8.19
1/2/2013	4:32:00	14.780	14.433	0.347	0.801	2.16	-0.621	7.45
1/2/2013	4:47:00	14.770	14.431	0.339	0.782	2.16	-0.602	7.22
1/2/2013	5:02:00	14.762	14.431	0.331	0.764	2.16	-0.584	7.00
1/2/2013	5:17:00	14.758	14.436	0.322	0.743	2.16	-0.563	6.75
1/2/2013	5:32:00	14.761	14.437	0.324	0.747	2.16	-0.567	6.81
1/2/2013	5:47:00	14.763	14.443	0.320	0.738	2.16	-0.558	6.70
1/2/2013	6:02:00	14.757	14.447	0.310	0.715	2.16	-0.535	6.42
1/2/2013	6:17:00	14.769	14.449	0.320	0.738	2.16	-0.558	6.70
1/2/2013	6:32:00	14.773	14.456	0.317	0.731	2.16	-0.551	6.62
1/2/2013	6:47:00	14.774	14.454	0.320	0.738	2.16	-0.558	6.70
1/2/2013	7:02:00	14.778	14.455	0.323	0.745	2.16	-0.565	6.78
1/2/2013	7:17:00	14.779	14.461	0.318	0.734	2.16	-0.554	6.64
1/2/2013	7:32:00	14.781	14.464	0.317	0.731	2.16	-0.551	6.62
1/2/2013	7:47:00	14.784	14.464	0.320	0.738	2.16	-0.558	6.70
1/2/2013	8:02:00	14.782	14.472	0.310	0.715	2.16	-0.535	6.42
1/2/2013	8:17:00	14.784	14.477	0.307	0.708	2.16	-0.528	6.34
1/2/2013	8:32:00	14.789	14.483	0.306	0.706	2.16	-0.526	6.31
1/2/2013	8:47:00	14.783	14.484	0.299	0.690	2.16	-0.510	6.12
1/2/2013	9:02:00	14.788	14.483	0.305	0.704	2.16	-0.524	6.28
1/2/2013	9:17:00	14.792	14.489	0.303	0.699	2.16	-0.519	6.23
1/2/2013	9:32:00	14.792	14.492	0.300	0.692	2.16	-0.512	6.15
1/2/2013	9:47:00	14.799	14.488	0.311	0.717	2.16	-0.537	6.45
1/2/2013	10:02:00	14.797	14.500	0.297	0.685	2.16	-0.505	6.06
1/2/2013	10:17:00	14.795	14.490	0.305	0.704	2.16	-0.524	6.28
1/2/2013	10:32:00	14.803	14.493	0.310	0.715	2.16	-0.535	6.42
1/2/2013	10:47:00	14.820	14.486	0.334	0.771	2.16	-0.591	7.09
1/2/2013	11:02:00	14.834	14.489	0.345	0.796	2.16	-0.616	7.39
1/2/2013	11:17:00	14.834	14.486	0.348	0.803	2.16	-0.623	7.47
1/2/2013	11:32:00	14.825	14.485	0.340	0.784	2.16	-0.604	7.25
1/2/2013	11:47:00	14.821	14.481	0.340	0.784	2.16	-0.604	7.25
1/2/2013	12:02:00	14.813	14.485	0.328	0.757	2.16	-0.577	6.92
1/2/2013	12:17:00	14.815	14.478	0.337	0.777	2.16	-0.597	7.17
1/2/2013	12:32:00	14.812	14.479	0.333	0.768	2.16	-0.588	7.06
1/2/2013	12:47:00	14.806	14.481	0.325	0.750	2.16	-0.570	6.84
1/2/2013	13:02:00	14.807	14.477	0.330	0.761	2.16	-0.581	6.98
1/2/2013	13:17:00	14.801	14.480	0.321	0.741	2.16	-0.561	6.73
1/2/2013	13:32:00	14.796	14.482	0.314	0.724	2.16	-0.544	6.53
1/2/2013	13:47:00	14.797	14.484	0.313	0.722	2.16	-0.542	6.51
1/2/2013	14:02:00	14.799	14.488	0.311	0.717	2.16	-0.537	6.45
1/2/2013	14:17:00	14.793	14.494	0.299	0.690	2.16	-0.510	6.12
1/2/2013	14:32:00	14.797	14.486	0.311	0.717	2.16	-0.537	6.45
1/2/2013	14:47:00	14.791	14.494	0.297	0.685	2.16	-0.505	6.06
1/2/2013	15:02:00	14.795	14.490	0.305	0.704	2.16	-0.524	6.28
1/2/2013	15:17:00	14.794	14.495	0.299	0.690	2.16	-0.510	6.12
1/2/2013	15:32:00	14.793	14.494	0.299	0.690	2.16	-0.510	6.12
1/2/2013	15:47:00	14.789	14.498	0.291	0.671	2.16	-0.491	5.90
1/2/2013	16:02:00	14.795	14.495	0.300	0.692	2.16	-0.512	6.15
1/2/2013	16:17:00	14.792	14.500	0.292	0.674	2.16	-0.494	5.92
1/2/2013	16:32:00	14.797	14.501	0.296	0.683	2.16	-0.503	6.03
1/2/2013	16:47:00	14.795	14.509	0.286	0.660	2.16	-0.480	5.76
1/2/2013	17:02:00	14.789	14.498	0.291	0.671	2.16	-0.491	5.90
1/2/2013	17:17:00	14.792	14.501	0.291	0.671	2.16	-0.491	5.90
1/2/2013	17:32:00	14.792	14.508	0.284	0.655	2.16	-0.475	5.70
1/2/2013	17:47:00	14.806	14.507	0.299	0.690	2.16	-0.510	6.12
1/2/2013	18:02:00	14.797	14.505	0.292	0.674	2.16	-0.494	5.92
1/2/2013	18:17:00	14.800	14.524	0.276	0.637	2.16	-0.457	5.48
1/2/2013	18:32:00	14.800	14.497	0.303	0.699	2.16	-0.519	6.23
1/2/2013	18:47:00	14.805	14.524	0.281	0.648	2.16	-0.468	5.62
1/2/2013	19:02:00	14.805	14.507	0.298	0.687	2.16	-0.507	6.09
1/2/2013	19:17:00	14.809	14.519	0.290	0.669	2.16	-0.489	5.87
1/2/2013	19:32:00	14.799	14.530	0.269	0.621	2.16	-0.441	5.29
1/2/2013	19:47:00	14.802	14.524	0.278	0.641	2.16	-0.461	5.54
1/2/2013	20:02:00	14.788	14.531	0.257	0.593	2.16	-0.413	4.95
1/2/2013	20:17:00	14.788	14.505	0.283	0.653	2.16	-0.473	5.67
1/2/2013	20:32:00	14.786	14.526	0.260	0.600	2.16	-0.420	5.04
1/2/2013	20:47:00	14.797	14.524	0.273	0.630	2.16	-0.450	5.40
1/2/2013	21:02:00	14.791	14.542	0.249	0.574	2.16	-0.394	4.73
1/2/2013	21:17:00	14.791	14.539	0.252	0.581	2.16	-0.401	4.82
1/2/2013	21:32:00	14.786	14.532	0.254	0.586	2.16	-0.406	4.87
1/2/2013	21:47:00	14.791	14.527	0.264	0.609	2.16	-0.429	5.15
1/2/2013	22:02:00	14.793	14.542	0.251	0.579	2.16	-0.399	4.79
1/2/2013	22:17:00	14.790	14.537	0.253	0.584	2.16	-0.404	4.84
1/2/2013	22:32:00	14.790	14.526	0.264	0.609	2.16	-0.429	5.15
1/2/2013	22:47:00	14.799	14.538	0.261	0.602	2.16	-0.422	5.07
1/2/2013	23:02:00	14.791	14.523	0.268	0.618	2.16	-0.438	5.26
1/2/2013	23:17:00	14.785	14.520	0.265	0.611	2.16	-0.431	5.18
1/2/2013	23:32:00	14.785	14.510	0.275	0.634	2.16	-0.454	5.45
1/2/2013	23:47:00	14.786	14.513	0.273	0.630	2.16	-0.450	5.40
1/3/2013	0:02:00	14.784	14.509	0.275	0.634	2.16	-0.454	5.45
1/3/2013	0:17:00	14.773	14.512	0.261	0.602	2.16	-0.422	5.07
1/3/2013	0:32:00	14.776	14.517	0.259	0.598	2.16	-0.418	5.01
1/3/2013	0:47:00	14.772	14.520	0.252	0.581	2.16	-0.401	4.82
1/3/2013	1:02:00	14.769	14.520	0.249	0.574	2.16	-0.394	4.73
1/3/2013	1:17:00	14.765	14.523	0.242	0.558	2.16	-0.378	4.54
1/3/2013	1:32:00	14.771	14.513	0.258	0.595	2.16	-0.415	4.98
1/3/2013	1:47:00	14.768	14.520	0.248	0.572	2.16	-0.392	4.71

1/3/2013	2:02:00	14.764	14.520	0.244	0.563	2.16	-0.383	4.59
1/3/2013	2:17:00	14.770	14.532	0.238	0.549	2.16	-0.369	4.43
1/3/2013	2:32:00	14.768	14.532	0.236	0.544	2.16	-0.364	4.37
1/3/2013	2:47:00	14.769	14.525	0.244	0.563	2.16	-0.383	4.59
1/3/2013	3:02:00	14.775	14.524	0.251	0.579	2.16	-0.399	4.79
1/3/2013	3:17:00	14.773	14.519	0.254	0.586	2.16	-0.406	4.87
1/3/2013	3:32:00	14.769	14.531	0.238	0.549	2.16	-0.369	4.43
1/3/2013	3:47:00	14.775	14.526	0.249	0.574	2.16	-0.394	4.73
1/3/2013	4:02:00	14.772	14.533	0.239	0.551	2.16	-0.371	4.46
1/3/2013	4:17:00	14.768	14.523	0.245	0.565	2.16	-0.385	4.62
1/3/2013	4:32:00	14.772	14.521	0.251	0.579	2.16	-0.399	4.79
1/3/2013	4:47:00	14.773	14.519	0.254	0.586	2.16	-0.406	4.87
1/3/2013	5:02:00	14.770	14.523	0.247	0.570	2.16	-0.390	4.68
1/3/2013	5:17:00	14.777	14.526	0.251	0.579	2.16	-0.399	4.79
1/3/2013	5:32:00	14.769	14.532	0.237	0.547	2.16	-0.367	4.40
1/3/2013	5:47:00	14.762	14.526	0.236	0.544	2.16	-0.364	4.37
1/3/2013	6:02:00	14.754	14.530	0.224	0.517	2.16	-0.337	4.04
1/3/2013	6:17:00	14.760	14.529	0.231	0.533	2.16	-0.353	4.24
1/3/2013	6:32:00	14.762	14.524	0.238	0.549	2.16	-0.369	4.43
1/3/2013	6:47:00	14.754	14.526	0.228	0.526	2.16	-0.346	4.15
1/3/2013	7:02:00	14.754	14.535	0.219	0.505	2.16	-0.325	3.90
1/3/2013	7:17:00	14.759	14.541	0.218	0.503	2.16	-0.323	3.88
1/3/2013	7:32:00	14.758	14.548	0.210	0.484	2.16	-0.304	3.65
1/3/2013	7:47:00	14.761	14.541	0.220	0.508	2.16	-0.328	3.93
1/3/2013	8:02:00	14.765	14.553	0.212	0.489	2.16	-0.309	3.71
1/3/2013	8:17:00	14.764	14.556	0.208	0.480	2.16	-0.300	3.60
1/3/2013	8:32:00	14.766	14.548	0.218	0.503	2.16	-0.323	3.88
1/3/2013	8:47:00	14.768	14.555	0.213	0.491	2.16	-0.311	3.74
1/3/2013	9:02:00	14.772	14.542	0.230	0.531	2.16	-0.351	4.21
1/3/2013	9:17:00	14.772	14.556	0.216	0.498	2.16	-0.318	3.82
1/3/2013	9:32:00	14.776	14.549	0.227	0.524	2.16	-0.344	4.12
1/3/2013	9:47:00	14.773	14.550	0.223	0.514	2.16	-0.334	4.01
1/3/2013	10:02:00	14.773	14.550	0.223	0.514	2.16	-0.334	4.01
1/3/2013	10:17:00	14.775	14.563	0.212	0.489	2.16	-0.309	3.71
1/3/2013	10:32:00	14.774	14.556	0.218	0.503	2.16	-0.323	3.88
1/3/2013	10:47:00	14.779	14.551	0.228	0.526	2.16	-0.346	4.15
1/3/2013	11:02:00	14.778	14.532	0.246	0.568	2.16	-0.388	4.65
1/3/2013	11:17:00	14.776	14.526	0.250	0.577	2.16	-0.397	4.76
1/3/2013	11:32:00	14.772	14.528	0.244	0.563	2.16	-0.383	4.59
1/3/2013	11:47:00	14.766	14.522	0.244	0.563	2.16	-0.383	4.59
1/3/2013	12:02:00	14.767	14.527	0.240	0.554	2.16	-0.374	4.48
1/3/2013	12:17:00	14.760	14.528	0.232	0.535	2.16	-0.355	4.26
1/3/2013	12:32:00	14.757	14.547	0.210	0.484	2.16	-0.304	3.65
1/3/2013	12:47:00	14.757	14.520	0.237	0.547	2.16	-0.367	4.40
1/3/2013	13:02:00	14.754	14.541	0.213	0.491	2.16	-0.311	3.74
1/3/2013	13:17:00	14.756	14.540	0.216	0.498	2.16	-0.318	3.82
1/3/2013	13:32:00	14.761	14.544	0.217	0.501	2.16	-0.321	3.85
1/3/2013	13:47:00	14.756	14.544	0.212	0.489	2.16	-0.309	3.71
1/3/2013	14:02:00	14.747	14.522	0.225	0.519	2.16	-0.339	4.07
1/3/2013	14:17:00	14.748	14.529	0.219	0.505	2.16	-0.325	3.90
1/3/2013	14:32:00	14.752	14.543	0.209	0.482	2.16	-0.302	3.63
1/3/2013	14:47:00	14.751	14.535	0.216	0.498	2.16	-0.318	3.82
1/3/2013	15:02:00	14.752	14.541	0.211	0.487	2.16	-0.307	3.68
1/3/2013	15:17:00	14.755	14.540	0.215	0.496	2.16	-0.316	3.79
1/3/2013	15:32:00	14.760	14.542	0.218	0.503	2.16	-0.323	3.88
1/3/2013	15:47:00	14.766	14.553	0.213	0.491	2.16	-0.311	3.74
1/3/2013	16:02:00	14.764	14.545	0.219	0.505	2.16	-0.325	3.90
1/3/2013	16:17:00	14.762	14.552	0.210	0.484	2.16	-0.304	3.65
1/3/2013	16:32:00	14.761	14.556	0.205	0.473	2.16	-0.293	3.52
1/3/2013	16:47:00	14.764	14.560	0.204	0.471	2.16	-0.291	3.49
1/3/2013	17:02:00	14.763	14.563	0.200	0.461	2.16	-0.281	3.38
1/3/2013	17:17:00	14.772	14.563	0.209	0.482	2.16	-0.302	3.63
1/3/2013	17:32:00	14.776	14.562	0.214	0.494	2.16	-0.314	3.76
1/3/2013	17:47:00	14.771	14.563	0.208	0.480	2.16	-0.300	3.60
1/3/2013	18:02:00	14.782	14.573	0.209	0.482	2.16	-0.302	3.63
1/3/2013	18:17:00	14.783	14.578	0.205	0.473	2.16	-0.293	3.52
1/3/2013	18:32:00	14.781	14.579	0.202	0.466	2.16	-0.286	3.43
1/3/2013	18:47:00	14.781	14.576	0.205	0.473	2.16	-0.293	3.52
1/3/2013	19:02:00	14.783	14.581	0.202	0.466	2.16	-0.286	3.43
1/3/2013	19:17:00	14.783	14.584	0.199	0.459	2.16	-0.279	3.35
1/3/2013	19:32:00	14.786	14.576	0.210	0.484	2.16	-0.304	3.65
1/3/2013	19:47:00	14.792	14.578	0.214	0.494	2.16	-0.314	3.76
1/3/2013	20:02:00	14.789	14.586	0.203	0.468	2.16	-0.288	3.46
1/3/2013	20:17:00	14.792	14.582	0.210	0.484	2.16	-0.304	3.65
1/3/2013	20:32:00	14.792	14.577	0.215	0.496	2.16	-0.316	3.79
1/3/2013	20:47:00	14.794	14.600	0.194	0.448	2.16	-0.268	3.21
1/3/2013	21:02:00	14.796	14.588	0.208	0.480	2.16	-0.300	3.60
1/3/2013	21:17:00	14.796	14.603	0.193	0.445	2.16	-0.265	3.18
1/3/2013	21:32:00	14.795	14.598	0.197	0.454	2.16	-0.274	3.29
1/3/2013	21:47:00	14.799	14.580	0.219	0.505	2.16	-0.325	3.90
1/3/2013	22:02:00	14.799	14.602	0.197	0.454	2.16	-0.274	3.29
1/3/2013	22:17:00	14.801	14.592	0.209	0.482	2.16	-0.302	3.63
1/3/2013	22:32:00	14.796	14.592	0.204	0.471	2.16	-0.291	3.49
1/3/2013	22:47:00	14.799	14.606	0.193	0.445	2.16	-0.265	3.18
1/3/2013	23:02:00	14.803	14.598	0.205	0.473	2.16	-0.293	3.52
1/3/2013	23:17:00	14.798	14.584	0.214	0.494	2.16	-0.314	3.76
1/3/2013	23:32:00	14.798	14.597	0.201	0.464	2.16	-0.284	3.40
1/3/2013	23:47:00	14.801	14.587	0.214	0.494	2.16	-0.314	3.76
1/4/2013	0:02:00	14.798	14.594	0.204	0.471	2.16	-0.291	3.49
1/4/2013	0:17:00	14.797	14.597	0.200	0.461	2.16	-0.281	3.38
1/4/2013	0:32:00	14.794	14.579	0.215	0.496	2.16	-0.316	3.79
1/4/2013	0:47:00	14.797	14.611	0.186	0.429	2.16	-0.249	2.99
1/4/2013	1:02:00	14.794	14.604	0.190	0.438	2.16	-0.258	3.10
1/4/2013	1:17:00	14.796	14.612	0.184	0.424	2.16	-0.244	2.93
1/4/2013	1:32:00	14.797	14.600	0.197	0.454	2.16	-0.274	3.29
1/4/2013	1:47:00	14.801	14.610	0.191	0.441	2.16	-0.261	3.13
1/4/2013	2:02:00	14.806	14.602	0.204	0.471	2.16	-0.291	3.49
1/4/2013	2:17:00	14.804	14.583	0.221	0.510	2.16	-0.330	3.96
1/4/2013	2:32:00	14.802	14.595	0.207	0.478	2.16	-0.298	3.57
1/4/2013	2:47:00	14.808	14.592	0.216	0.498	2.16	-0.318	3.82
1/4/2013	3:02:00	14.808	14.604	0.204	0.471	2.16	-0.291	3.49
1/4/2013	3:17:00	14.806	14.592	0.214	0.494	2.16	-0.314	3.76
1/4/2013	3:32:00	14.806	14.607	0.199	0.459	2.16	-0.279	3.35
1/4/2013	3:47:00	14.804	14.605	0.199	0.459	2.16	-0.279	3.35
1/4/2013	4:02:00	14.797	14.601	0.196	0.452	2.16	-0.272	3.27
1/4/2013	4:17:00	14.799	14.584	0.215	0.496	2.16	-0.316	3.79
1/4/2013	4:32:00	14.800	14.605	0.195	0.450	2.16	-0.270	3.24
1/4/2013	4:47:00	14.800	14.601	0.199	0.459	2.16	-0.279	3.35
1/4/2013	5:02:00	14.797	14.588	0.209	0.482	2.16	-0.302	3.63
1/4/2013	5:17:00	14.801	14.602	0.199	0.459	2.16	-0.279	3.35
1/4/2013	5:32:00	14.794	14.620	0.174	0.401	2.16	-0.221	2.66
1/4/2013	5:47:00	14.797	14.613	0.184	0.424	2.16	-0.244	2.93
1/4/2013	6:02:00	14.799	14.612	0.187	0.431	2.16	-0.251	3.02
1/4/2013	6:17:00	14.804	14.601	0.203	0.468	2.16	-0.288	3.46
1/4/2013	6:32:00	14.805	14.619	0.186	0.429	2.16	-0.249	2.99
1/4/2013	6:47:00	14.804	14.612	0.192	0.443	2.16	-0.263	3.16
1/4/2013	7:02:00	14.804	14.614	0.190	0.438	2.16	-0.258	3.10
1/4/2013	7:17:00	14.808	14.616	0.192	0.443	2.16	-0.263	3.16
1/4/2013	7:32:00	14.811	14.624	0.187	0.431	2.16	-0.251	3.02
1/4/2013	7:47:00	14.810	14.626	0.184	0.424	2.16	-0.244	2.93
1/4/2013	8:02:00	14.811	14.612	0.199	0.459	2.16	-0.279	3.35
1/4/2013	8:17:00	14.811	14.629	0.182	0.420	2.16	-0.240	2.88
1/4/2013	8:32:00	14.812	14.617	0.195	0.450	2.16	-0.270	3.24
1/4/2013	8:47:00	14.818	14.627	0.191	0.441	2.16	-0.261	3.13
1/4/2013	9:02:00	14.826	14.625	0.201	0.464	2.16	-0.284	3.40
1/4/2013	9:17:00	14.821	14.629	0.192	0.443	2.16	-0.263	3.16
1/4/2013	9:32:00	14.823	14.621	0.202	0.466	2.16	-0.286	3.43
1/4/2013	9:47:00	14.825	14.617	0.208	0.480	2.16	-0.300	3.60
1/4/2013	10:02:00	14.826	14.613	0.213	0.491	2.16	-0.311	3.74
1/4/2013	10:17:00	14.826	14.612	0.214	0.494	2.16	-0.314	3.76
1/4/2013	10:32:00	14.828	14.608	0.220	0.508	2.16	-0.328	3.93
1/4/2013	10:47:00	14.824	14.603	0.221	0.510	2.16	-0.330	3.96
1/4/2013	11:02:00	14.822	14.601	0.221	0.510	2.16	-0.330	3.96

1/4/2013	11:17:00	14.817	14.601	0.216	0.498	2.16	-0.318	3.82
1/4/2013	11:32:00	14.812	14.597	0.215	0.496	2.16	-0.316	3.79
1/4/2013	11:47:00	14.809	14.585	0.224	0.517	2.16	-0.337	4.04
1/4/2013	12:02:00	14.803	14.590	0.213	0.491	2.16	-0.311	3.74
1/4/2013	12:17:00	14.803	14.582	0.221	0.510	2.16	-0.330	3.96
1/4/2013	12:32:00	14.802	14.578	0.224	0.517	2.16	-0.337	4.04
1/4/2013	12:47:00	14.798	14.570	0.228	0.526	2.16	-0.346	4.15
1/4/2013	13:02:00	14.792	14.569	0.223	0.514	2.16	-0.334	4.01
1/4/2013	13:17:00	14.791	14.568	0.223	0.514	2.16	-0.334	4.01
1/4/2013	13:32:00	14.779	14.565	0.214	0.494	2.16	-0.314	3.76
1/4/2013	13:47:00	14.783	14.565	0.218	0.503	2.16	-0.323	3.88
1/4/2013	14:02:00	14.770	14.571	0.199	0.459	2.16	-0.279	3.35
1/4/2013	14:17:00	14.771	14.562	0.209	0.482	2.16	-0.302	3.63
1/4/2013	14:32:00	14.770	14.572	0.198	0.457	2.16	-0.277	3.32
1/4/2013	14:47:00	14.765	14.572	0.193	0.445	2.16	-0.265	3.18
1/4/2013	15:02:00	14.777	14.570	0.207	0.478	2.16	-0.298	3.57
1/4/2013	15:17:00	14.778	14.566	0.212	0.489	2.16	-0.309	3.71
1/4/2013	15:32:00	14.764	14.566	0.198	0.457	2.16	-0.277	3.32
1/4/2013	15:47:00	14.765	14.572	0.193	0.445	2.16	-0.265	3.18
1/4/2013	16:02:00	14.775	14.565	0.210	0.484	2.16	-0.304	3.65
1/4/2013	16:17:00	14.771	14.573	0.198	0.457	2.16	-0.277	3.32
1/4/2013	16:32:00	14.769	14.573	0.196	0.452	2.16	-0.272	3.27
1/4/2013	16:47:00	14.768	14.583	0.185	0.427	2.16	-0.247	2.96
1/4/2013	17:02:00	14.769	14.583	0.186	0.429	2.16	-0.249	2.99
1/4/2013	17:17:00	14.765	14.580	0.185	0.427	2.16	-0.247	2.96
1/4/2013	17:32:00	14.767	14.588	0.179	0.413	2.16	-0.233	2.80
1/4/2013	17:47:00	14.779	14.587	0.192	0.443	2.16	-0.263	3.16
1/4/2013	18:02:00	14.783	14.594	0.189	0.436	2.16	-0.256	3.07
1/4/2013	18:17:00	14.777	14.591	0.186	0.429	2.16	-0.249	2.99
1/4/2013	18:32:00	14.773	14.595	0.178	0.411	2.16	-0.231	2.77
1/4/2013	18:47:00	14.780	14.599	0.181	0.418	2.16	-0.238	2.85
1/4/2013	19:02:00	14.783	14.592	0.191	0.441	2.16	-0.261	3.13
1/4/2013	19:17:00	14.791	14.600	0.191	0.441	2.16	-0.261	3.13
1/4/2013	19:32:00	14.790	14.604	0.186	0.429	2.16	-0.249	2.99
1/4/2013	19:47:00	14.796	14.599	0.197	0.454	2.16	-0.274	3.29
1/4/2013	20:02:00	14.794	14.614	0.180	0.415	2.16	-0.235	2.82
1/4/2013	20:17:00	14.796	14.626	0.170	0.392	2.16	-0.212	2.55
1/4/2013	20:32:00	14.791	14.626	0.165	0.381	2.16	-0.201	2.41
1/4/2013	20:47:00	14.794	14.617	0.177	0.408	2.16	-0.228	2.74
1/4/2013	21:02:00	14.797	14.602	0.195	0.450	2.16	-0.270	3.24
1/4/2013	21:17:00	14.798	14.617	0.181	0.418	2.16	-0.238	2.85
1/4/2013	21:32:00	14.799	14.623	0.176	0.406	2.16	-0.226	2.71
1/4/2013	21:47:00	14.800	14.605	0.195	0.450	2.16	-0.270	3.24
1/4/2013	22:02:00	14.803	14.628	0.175	0.404	2.16	-0.224	2.68
1/4/2013	22:17:00	14.805	14.604	0.201	0.464	2.16	-0.284	3.40
1/4/2013	22:32:00	14.805	14.621	0.184	0.424	2.16	-0.244	2.93
1/4/2013	22:47:00	14.807	14.626	0.181	0.418	2.16	-0.238	2.85
1/4/2013	23:02:00	14.804	14.612	0.192	0.443	2.16	-0.263	3.16
1/4/2013	23:17:00	14.803	14.623	0.180	0.415	2.16	-0.235	2.82
1/4/2013	23:32:00	14.805	14.600	0.205	0.473	2.16	-0.293	3.52
1/4/2013	23:47:00	14.802	14.611	0.191	0.441	2.16	-0.261	3.13
1/5/2013	0:02:00	14.804	14.626	0.178	0.411	2.16	-0.231	2.77
1/5/2013	0:17:00	14.806	14.600	0.206	0.475	2.16	-0.295	3.54
1/5/2013	0:32:00	14.801	14.601	0.200	0.461	2.16	-0.281	3.38
1/5/2013	0:47:00	14.799	14.624	0.175	0.404	2.16	-0.224	2.68
1/5/2013	1:02:00	14.807	14.610	0.197	0.454	2.16	-0.274	3.29
1/5/2013	1:17:00	14.797	14.609	0.188	0.434	2.16	-0.254	3.04
1/5/2013	1:32:00	14.803	14.640	0.163	0.376	2.16	-0.196	2.35
1/5/2013	1:47:00	14.804	14.626	0.178	0.411	2.16	-0.231	2.77
1/5/2013	2:02:00	14.799	14.634	0.165	0.381	2.16	-0.201	2.41
1/5/2013	2:17:00	14.802	14.627	0.175	0.404	2.16	-0.224	2.68
1/5/2013	2:32:00	14.808	14.635	0.173	0.399	2.16	-0.219	2.63
1/5/2013	2:47:00	14.809	14.605	0.204	0.471	2.16	-0.291	3.49
1/5/2013	3:02:00	14.809	14.619	0.190	0.438	2.16	-0.258	3.10
1/5/2013	3:17:00	14.806	14.617	0.189	0.436	2.16	-0.256	3.07
1/5/2013	3:32:00	14.807	14.630	0.177	0.408	2.16	-0.228	2.74
1/5/2013	3:47:00	14.804	14.632	0.172	0.397	2.16	-0.217	2.60
1/5/2013	4:02:00	14.802	14.608	0.194	0.448	2.16	-0.268	3.21
1/5/2013	4:17:00	14.805	14.618	0.187	0.431	2.16	-0.251	3.02
1/5/2013	4:32:00	14.809	14.616	0.193	0.445	2.16	-0.265	3.18
1/5/2013	4:47:00	14.805	14.615	0.190	0.438	2.16	-0.258	3.10
1/5/2013	5:02:00	14.802	14.621	0.181	0.418	2.16	-0.238	2.85
1/5/2013	5:17:00	14.804	14.624	0.180	0.415	2.16	-0.235	2.82
1/5/2013	5:32:00	14.807	14.627	0.180	0.415	2.16	-0.235	2.82
1/5/2013	5:47:00	14.803	14.637	0.166	0.383	2.16	-0.203	2.44
1/5/2013	6:02:00	14.807	14.621	0.186	0.429	2.16	-0.249	2.99
1/5/2013	6:17:00	14.809	14.642	0.167	0.385	2.16	-0.205	2.46
1/5/2013	6:32:00	14.805	14.631	0.174	0.401	2.16	-0.221	2.66
1/5/2013	6:47:00	14.810	14.638	0.172	0.397	2.16	-0.217	2.60
1/5/2013	7:02:00	14.812	14.633	0.179	0.413	2.16	-0.233	2.80
1/5/2013	7:17:00	14.815	14.644	0.171	0.394	2.16	-0.214	2.57
1/5/2013	7:32:00	14.818	14.641	0.177	0.408	2.16	-0.228	2.74
1/5/2013	7:47:00	14.825	14.661	0.164	0.378	2.16	-0.198	2.38
1/5/2013	8:02:00	14.827	14.661	0.166	0.383	2.16	-0.203	2.44
1/5/2013	8:17:00	14.826	14.646	0.180	0.415	2.16	-0.235	2.82
1/5/2013	8:32:00	14.830	14.649	0.181	0.418	2.16	-0.238	2.85
1/5/2013	8:47:00	14.831	14.657	0.174	0.401	2.16	-0.221	2.66
1/5/2013	9:02:00	14.837	14.654	0.183	0.422	2.16	-0.242	2.91
1/5/2013	9:17:00	14.837	14.655	0.182	0.420	2.16	-0.240	2.88
1/5/2013	9:32:00	14.840	14.653	0.187	0.431	2.16	-0.251	3.02
1/5/2013	9:47:00	14.836	14.648	0.188	0.434	2.16	-0.254	3.04
1/5/2013	10:02:00	14.846	14.645	0.201	0.464	2.16	-0.284	3.40
1/5/2013	10:17:00	14.843	14.642	0.201	0.464	2.16	-0.284	3.40
1/5/2013	10:32:00	14.844	14.636	0.208	0.480	2.16	-0.300	3.60
1/5/2013	10:47:00	14.840	14.633	0.207	0.478	2.16	-0.298	3.57
1/5/2013	11:02:00	14.839	14.627	0.212	0.489	2.16	-0.309	3.71
1/5/2013	11:17:00	14.835	14.618	0.217	0.501	2.16	-0.321	3.85
1/5/2013	11:32:00	14.836	14.622	0.214	0.494	2.16	-0.314	3.76
1/5/2013	11:47:00	14.830	14.618	0.212	0.489	2.16	-0.309	3.71
1/5/2013	12:02:00	14.820	14.612	0.208	0.480	2.16	-0.300	3.60
1/5/2013	12:17:00	14.818	14.604	0.214	0.494	2.16	-0.314	3.76
1/5/2013	12:32:00	14.815	14.601	0.214	0.494	2.16	-0.314	3.76
1/5/2013	12:47:00	14.808	14.600	0.208	0.480	2.16	-0.300	3.60
1/5/2013	13:02:00	14.806	14.598	0.208	0.480	2.16	-0.300	3.60
1/5/2013	13:17:00	14.802	14.596	0.206	0.475	2.16	-0.295	3.54
1/5/2013	13:32:00	14.795	14.593	0.202	0.466	2.16	-0.286	3.43
1/5/2013	13:47:00	14.794	14.594	0.200	0.461	2.16	-0.281	3.38
1/5/2013	14:02:00	14.789	14.599	0.190	0.438	2.16	-0.258	3.10
1/5/2013	14:17:00	14.788	14.596	0.192	0.443	2.16	-0.263	3.16
1/5/2013	14:32:00	14.788	14.602	0.186	0.429	2.16	-0.249	2.99
1/5/2013	14:47:00	14.783	14.608	0.175	0.404	2.16	-0.224	2.68
1/5/2013	15:02:00	14.780	14.599	0.181	0.418	2.16	-0.238	2.85
1/5/2013	15:17:00	14.791	14.599	0.192	0.443	2.16	-0.263	3.16
1/5/2013	15:32:00	14.793	14.600	0.193	0.445	2.16	-0.265	3.18
1/5/2013	15:47:00	14.791	14.589	0.202	0.466	2.16	-0.286	3.43
1/5/2013	16:02:00	14.791	14.592	0.199	0.459	2.16	-0.279	3.35
1/5/2013	16:17:00	14.785	14.589	0.196	0.452	2.16	-0.272	3.27
1/5/2013	16:32:00	14.790	14.589	0.201	0.464	2.16	-0.284	3.40
1/5/2013	16:47:00	14.788	14.590	0.198	0.457	2.16	-0.277	3.32
1/5/2013	17:02:00	14.780	14.597	0.183	0.422	2.16	-0.242	2.91
1/5/2013	17:17:00	14.779	14.603	0.176	0.406	2.16	-0.226	2.71
1/5/2013	17:32:00	14.786	14.596	0.190	0.438	2.16	-0.258	3.10
1/5/2013	17:47:00	14.783	14.598	0.185	0.427	2.16	-0.247	2.96
1/5/2013	18:02:00	14.782	14.597	0.185	0.427	2.16	-0.247	2.96
1/5/2013	18:17:00	14.783	14.604	0.179	0.413	2.16	-0.233	2.80
1/5/2013	18:32:00	14.783	14.599	0.184	0.424	2.16	-0.244	2.93
1/5/2013	18:47:00	14.790	14.603	0.187	0.431	2.16	-0.251	3.02
1/5/2013	19:02:00	14.781	14.592	0.189	0.436	2.16	-0.256	3.07
1/5/2013	19:17:00	14.781	14.605	0.176	0.406	2.16	-0.226	2.71
1/5/2013	19:32:00	14.789	14.606	0.183	0.422	2.16	-0.242	2.91
1/5/2013	19:47:00	14.785	14.591	0.194	0.448	2.16	-0.268	3.21
1/5/2013	20:02:00	14.782	14.599	0.183	0.422	2.16	-0.242	2.91
1/5/2013	20:17:00	14.780	14.595	0.185	0.427	2.16	-0.247	2.96

1/5/2013	20:32:00	14.786	14.603	0.183	0.422	2.16	-0.242	2.91
1/5/2013	20:47:00	14.787	14.606	0.181	0.418	2.16	-0.238	2.85
1/5/2013	21:02:00	14.791	14.598	0.193	0.445	2.16	-0.265	3.18
1/5/2013	21:17:00	14.787	14.602	0.185	0.427	2.16	-0.247	2.96
1/5/2013	21:32:00	14.787	14.603	0.184	0.424	2.16	-0.244	2.93
1/5/2013	21:47:00	14.785	14.598	0.187	0.431	2.16	-0.251	3.02
1/5/2013	22:02:00	14.788	14.593	0.195	0.450	2.16	-0.270	3.24
1/5/2013	22:17:00	14.786	14.583	0.203	0.468	2.16	-0.288	3.46
1/5/2013	22:32:00	14.788	14.574	0.214	0.494	2.16	-0.314	3.76
1/5/2013	22:47:00	14.782	14.574	0.208	0.480	2.16	-0.300	3.60
1/5/2013	23:02:00	14.777	14.566	0.211	0.487	2.16	-0.307	3.68
1/5/2013	23:17:00	14.776	14.567	0.209	0.482	2.16	-0.302	3.63
1/5/2013	23:32:00	14.762	14.563	0.199	0.459	2.16	-0.279	3.35
1/5/2013	23:47:00	14.757	14.565	0.192	0.443	2.16	-0.263	3.16
1/6/2013	0:02:00	14.759	14.567	0.192	0.443	2.16	-0.263	3.16
1/6/2013	0:17:00	14.752	14.562	0.190	0.438	2.16	-0.258	3.10
1/6/2013	0:32:00	14.747	14.567	0.180	0.415	2.16	-0.235	2.82
1/6/2013	0:47:00	14.752	14.565	0.187	0.431	2.16	-0.251	3.02
1/6/2013	1:02:00	14.754	14.567	0.187	0.431	2.16	-0.251	3.02
1/6/2013	1:17:00	14.751	14.567	0.184	0.424	2.16	-0.244	2.93
1/6/2013	1:32:00	14.753	14.570	0.183	0.422	2.16	-0.242	2.91
1/6/2013	1:47:00	14.753	14.559	0.194	0.448	2.16	-0.268	3.21
1/6/2013	2:02:00	14.755	14.568	0.187	0.431	2.16	-0.251	3.02
1/6/2013	2:17:00	14.748	14.562	0.186	0.429	2.16	-0.249	2.99
1/6/2013	2:32:00	14.750	14.555	0.195	0.450	2.16	-0.270	3.24
1/6/2013	2:47:00	14.753	14.553	0.200	0.461	2.16	-0.281	3.38
1/6/2013	3:02:00	14.751	14.554	0.197	0.454	2.16	-0.274	3.29
1/6/2013	3:17:00	14.744	14.551	0.193	0.445	2.16	-0.265	3.18
1/6/2013	3:32:00	14.743	14.549	0.194	0.448	2.16	-0.268	3.21
1/6/2013	3:47:00	14.735	14.543	0.192	0.443	2.16	-0.263	3.16
1/6/2013	4:02:00	14.736	14.547	0.189	0.436	2.16	-0.256	3.07
1/6/2013	4:17:00	14.736	14.539	0.197	0.454	2.16	-0.274	3.29
1/6/2013	4:32:00	14.733	14.539	0.194	0.448	2.16	-0.268	3.21
1/6/2013	4:47:00	14.730	14.537	0.193	0.445	2.16	-0.265	3.18
1/6/2013	5:02:00	14.730	14.539	0.191	0.441	2.16	-0.261	3.13
1/6/2013	5:17:00	14.730	14.539	0.191	0.441	2.16	-0.261	3.13
1/6/2013	5:32:00	14.723	14.536	0.187	0.431	2.16	-0.251	3.02
1/6/2013	5:47:00	14.718	14.540	0.178	0.411	2.16	-0.231	2.77
1/6/2013	6:02:00	14.716	14.539	0.177	0.408	2.16	-0.228	2.74
1/6/2013	6:17:00	14.718	14.542	0.176	0.406	2.16	-0.226	2.71
1/6/2013	6:32:00	14.718	14.547	0.171	0.394	2.16	-0.214	2.57
1/6/2013	6:47:00	14.725	14.547	0.178	0.411	2.16	-0.231	2.77
1/6/2013	7:02:00	14.722	14.548	0.174	0.401	2.16	-0.221	2.66
1/6/2013	7:17:00	14.726	14.544	0.182	0.420	2.16	-0.240	2.88
1/6/2013	7:32:00	14.722	14.550	0.172	0.397	2.16	-0.217	2.60
1/6/2013	7:47:00	14.726	14.556	0.170	0.392	2.16	-0.212	2.55
1/6/2013	8:02:00	14.736	14.552	0.184	0.424	2.16	-0.244	2.93
1/6/2013	8:17:00	14.732	14.551	0.181	0.418	2.16	-0.238	2.85
1/6/2013	8:32:00	14.729	14.554	0.175	0.404	2.16	-0.224	2.68
1/6/2013	8:47:00	14.738	14.555	0.183	0.422	2.16	-0.242	2.91
1/6/2013	9:02:00	14.733	14.552	0.181	0.418	2.16	-0.238	2.85
1/6/2013	9:17:00	14.732	14.553	0.179	0.413	2.16	-0.233	2.80
1/6/2013	9:32:00	14.735	14.549	0.186	0.429	2.16	-0.249	2.99
1/6/2013	9:47:00	14.735	14.546	0.189	0.436	2.16	-0.256	3.07
1/6/2013	10:02:00	14.736	14.540	0.196	0.452	2.16	-0.272	3.27
1/6/2013	10:17:00	14.734	14.537	0.197	0.454	2.16	-0.274	3.29
1/6/2013	10:32:00	14.731	14.534	0.197	0.454	2.16	-0.274	3.29
1/6/2013	10:47:00	14.732	14.526	0.206	0.475	2.16	-0.295	3.54
1/6/2013	11:02:00	14.719	14.517	0.202	0.466	2.16	-0.286	3.43
1/6/2013	11:17:00	14.720	14.523	0.197	0.454	2.16	-0.274	3.29
1/6/2013	11:32:00	14.721	14.523	0.198	0.457	2.16	-0.277	3.32
1/6/2013	11:47:00	14.714	14.512	0.202	0.466	2.16	-0.286	3.43
1/6/2013	12:02:00	14.707	14.517	0.190	0.438	2.16	-0.258	3.10
1/6/2013	12:17:00	14.708	14.506	0.202	0.466	2.16	-0.286	3.43
1/6/2013	12:32:00	14.703	14.495	0.208	0.480	2.16	-0.300	3.60
1/6/2013	12:47:00	14.695	14.503	0.192	0.443	2.16	-0.263	3.16
1/6/2013	13:02:00	14.695	14.499	0.196	0.452	2.16	-0.272	3.27
1/6/2013	13:17:00	14.687	14.495	0.192	0.443	2.16	-0.263	3.16
1/6/2013	13:32:00	14.684	14.495	0.189	0.436	2.16	-0.256	3.07
1/6/2013	13:47:00	14.680	14.492	0.188	0.434	2.16	-0.254	3.04
1/6/2013	14:02:00	14.676	14.490	0.186	0.429	2.16	-0.249	2.99
1/6/2013	14:17:00	14.681	14.498	0.183	0.422	2.16	-0.242	2.91
1/6/2013	14:32:00	14.673	14.488	0.185	0.427	2.16	-0.247	2.96
1/6/2013	14:47:00	14.675	14.489	0.186	0.429	2.16	-0.249	2.99
1/6/2013	15:02:00	14.678	14.489	0.189	0.436	2.16	-0.256	3.07
1/6/2013	15:17:00	14.675	14.482	0.193	0.445	2.16	-0.265	3.18
1/6/2013	15:32:00	14.675	14.491	0.184	0.424	2.16	-0.244	2.93
1/6/2013	15:47:00	14.669	14.488	0.181	0.418	2.16	-0.238	2.85
1/6/2013	16:02:00	14.672	14.482	0.190	0.438	2.16	-0.258	3.10
1/6/2013	16:17:00	14.671	14.483	0.188	0.434	2.16	-0.254	3.04
1/6/2013	16:32:00	14.665	14.487	0.178	0.411	2.16	-0.231	2.77
1/6/2013	16:47:00	14.674	14.488	0.186	0.429	2.16	-0.249	2.99
1/6/2013	17:02:00	14.667	14.501	0.166	0.383	2.16	-0.203	2.44
1/6/2013	17:17:00	14.668	14.498	0.170	0.392	2.16	-0.212	2.55
1/6/2013	17:32:00	14.669	14.507	0.162	0.374	2.16	-0.194	2.32
1/6/2013	17:47:00	14.671	14.493	0.178	0.411	2.16	-0.231	2.77
1/6/2013	18:02:00	14.673	14.495	0.178	0.411	2.16	-0.231	2.77
1/6/2013	18:17:00	14.681	14.504	0.177	0.408	2.16	-0.228	2.74
1/6/2013	18:32:00	14.685	14.503	0.182	0.420	2.16	-0.240	2.88
1/6/2013	18:47:00	14.682	14.507	0.175	0.404	2.16	-0.224	2.68
1/6/2013	19:02:00	14.683	14.510	0.173	0.399	2.16	-0.219	2.63
1/6/2013	19:17:00	14.681	14.515	0.166	0.383	2.16	-0.203	2.44
1/6/2013	19:32:00	14.681	14.510	0.171	0.394	2.16	-0.214	2.57
1/6/2013	19:47:00	14.684	14.520	0.164	0.378	2.16	-0.198	2.38
1/6/2013	20:02:00	14.687	14.521	0.166	0.383	2.16	-0.203	2.44
1/6/2013	20:17:00	14.690	14.526	0.164	0.378	2.16	-0.198	2.38
1/6/2013	20:32:00	14.686	14.523	0.163	0.376	2.16	-0.196	2.35
1/6/2013	20:47:00	14.693	14.518	0.175	0.404	2.16	-0.224	2.68
1/6/2013	21:02:00	14.698	14.546	0.152	0.351	2.16	-0.171	2.05
1/6/2013	21:17:00	14.699	14.547	0.152	0.351	2.16	-0.171	2.05
1/6/2013	21:32:00	14.697	14.554	0.143	0.330	2.16	-0.150	1.80
1/6/2013	21:47:00	14.700	14.539	0.161	0.371	2.16	-0.191	2.30
1/6/2013	22:02:00	14.711	14.556	0.155	0.358	2.16	-0.178	2.13
1/6/2013	22:17:00	14.715	14.545	0.170	0.392	2.16	-0.212	2.55
1/6/2013	22:32:00	14.712	14.558	0.154	0.355	2.16	-0.175	2.10
1/6/2013	22:47:00	14.719	14.556	0.163	0.376	2.16	-0.196	2.35
1/6/2013	23:02:00	14.720	14.552	0.168	0.388	2.16	-0.208	2.49
1/6/2013	23:17:00	14.720	14.566	0.154	0.355	2.16	-0.175	2.10
1/6/2013	23:32:00	14.723	14.557	0.166	0.383	2.16	-0.203	2.44
1/6/2013	23:47:00	14.730	14.557	0.173	0.399	2.16	-0.219	2.63
1/7/2013	0:02:00	14.728	14.557	0.171	0.394	2.16	-0.214	2.57
1/7/2013	0:17:00	14.732	14.562	0.170	0.392	2.16	-0.212	2.55
1/7/2013	0:32:00	14.735	14.562	0.173	0.399	2.16	-0.219	2.63
1/7/2013	0:47:00	14.739	14.562	0.177	0.408	2.16	-0.228	2.74
1/7/2013	1:02:00	14.733	14.562	0.171	0.394	2.16	-0.214	2.57
1/7/2013	1:17:00	14.736	14.566	0.170	0.392	2.16	-0.212	2.55
1/7/2013	1:32:00	14.731	14.565	0.166	0.383	2.16	-0.203	2.44
1/7/2013	1:47:00	14.735	14.565	0.170	0.392	2.16	-0.212	2.55
1/7/2013	2:02:00	14.734	14.578	0.156	0.360	2.16	-0.180	2.16
1/7/2013	2:17:00	14.738	14.572	0.166	0.383	2.16	-0.203	2.44
1/7/2013	2:32:00	14.744	14.569	0.175	0.404	2.16	-0.224	2.68
1/7/2013	2:47:00	14.740	14.579	0.161	0.371	2.16	-0.191	2.30
1/7/2013	3:02:00	14.740	14.592	0.148	0.341	2.16	-0.161	1.94
1/7/2013	3:17:00	14.741	14.590	0.151	0.348	2.16	-0.168	2.02
1/7/2013	3:32:00	14.742	14.580	0.162	0.374	2.16	-0.194	2.32
1/7/2013	3:47:00	14.740	14.587	0.153	0.353	2.16	-0.173	2.08
1/7/2013	4:02:00	14.749	14.599	0.150	0.346	2.16	-0.166	1.99
1/7/2013	4:17:00	14.750	14.577	0.173	0.399	2.16	-0.219	2.63
1/7/2013	4:32:00	14.757	14.601	0.156	0.360	2.16	-0.180	2.16
1/7/2013	4:47:00	14.752	14.577	0.175	0.404	2.16	-0.224	2.68
1/7/2013	5:02:00	14.753	14.610	0.143	0.330	2.16	-0.150	1.80
1/7/2013	5:17:00	14.754	14.608	0.146	0.337	2.16	-0.157	1.88
1/7/2013	5:32:00	14.757	14.597	0.160	0.369	2.16	-0.189	2.27

1/7/2013	5:47:00	14.766	14.620	0.146	0.337	2.16	-0.157	1.88
1/7/2013	6:02:00	14.768	14.620	0.148	0.341	2.16	-0.161	1.94
1/7/2013	6:17:00	14.772	14.631	0.141	0.325	2.16	-0.145	1.74
1/7/2013	6:32:00	14.771	14.616	0.155	0.358	2.16	-0.178	2.13
1/7/2013	6:47:00	14.778	14.638	0.140	0.323	2.16	-0.143	1.72
1/7/2013	7:02:00	14.781	14.622	0.159	0.367	2.16	-0.187	2.24
1/7/2013	7:17:00	14.785	14.627	0.158	0.365	2.16	-0.185	2.21
1/7/2013	7:32:00	14.791	14.633	0.158	0.365	2.16	-0.185	2.21
1/7/2013	7:47:00	14.793	14.641	0.152	0.351	2.16	-0.171	2.05
1/7/2013	8:02:00	14.799	14.642	0.157	0.362	2.16	-0.182	2.19
1/7/2013	8:17:00	14.801	14.641	0.160	0.369	2.16	-0.189	2.27
1/7/2013	8:32:00	14.804	14.646	0.158	0.365	2.16	-0.185	2.21
1/7/2013	8:47:00	14.805	14.648	0.157	0.362	2.16	-0.182	2.19
1/7/2013	9:02:00	14.806	14.657	0.149	0.344	2.16	-0.164	1.96
1/7/2013	9:17:00	14.811	14.657	0.154	0.355	2.16	-0.175	2.10
1/7/2013	9:32:00	14.816	14.659	0.157	0.362	2.16	-0.182	2.19
1/7/2013	9:47:00	14.822	14.660	0.162	0.374	2.16	-0.194	2.32
1/7/2013	10:02:00	14.828	14.659	0.169	0.390	2.16	-0.210	2.52
1/7/2013	10:17:00	14.830	14.656	0.174	0.401	2.16	-0.221	2.66
1/7/2013	10:32:00	14.834	14.650	0.184	0.424	2.16	-0.244	2.93
1/7/2013	10:47:00	14.833	14.654	0.179	0.413	2.16	-0.233	2.80
1/7/2013	11:02:00	14.836	14.644	0.192	0.443	2.16	-0.263	3.16
1/7/2013	11:17:00	14.829	14.643	0.186	0.429	2.16	-0.249	2.99
1/7/2013	11:32:00	14.824	14.642	0.182	0.420	2.16	-0.240	2.88
1/7/2013	11:47:00	14.828	14.635	0.193	0.445	2.16	-0.265	3.18
1/7/2013	12:02:00	14.821	14.636	0.185	0.427	2.16	-0.247	2.96
1/7/2013	12:17:00	14.820	14.633	0.187	0.431	2.16	-0.251	3.02
1/7/2013	12:32:00	14.814	14.638	0.176	0.406	2.16	-0.226	2.71
1/7/2013	12:47:00	14.808	14.631	0.177	0.408	2.16	-0.228	2.74
1/7/2013	13:02:00	14.810	14.628	0.182	0.420	2.16	-0.240	2.88
1/7/2013	13:17:00	14.818	14.637	0.181	0.418	2.16	-0.238	2.85
1/7/2013	13:32:00	14.811	14.632	0.179	0.413	2.16	-0.233	2.80
1/7/2013	13:47:00	14.810	14.632	0.178	0.411	2.16	-0.231	2.77
1/7/2013	14:02:00	14.814	14.633	0.181	0.418	2.16	-0.238	2.85
1/7/2013	14:17:00	14.817	14.631	0.186	0.429	2.16	-0.249	2.99
1/7/2013	14:32:00	14.799	14.635	0.164	0.378	2.16	-0.198	2.38
1/7/2013	14:47:00	14.803	14.633	0.170	0.392	2.16	-0.212	2.55
1/7/2013	15:02:00	14.797	14.636	0.161	0.371	2.16	-0.191	2.30
1/7/2013	15:17:00	14.811	14.634	0.177	0.408	2.16	-0.228	2.74
1/7/2013	15:32:00	14.822	14.633	0.189	0.436	2.16	-0.256	3.07
1/7/2013	15:47:00	14.805	14.637	0.168	0.388	2.16	-0.208	2.49
1/7/2013	16:02:00	14.810	14.642	0.168	0.388	2.16	-0.208	2.49
1/7/2013	16:17:00	14.814	14.641	0.173	0.399	2.16	-0.219	2.63
1/7/2013	16:32:00	14.813	14.645	0.168	0.388	2.16	-0.208	2.49
1/7/2013	16:47:00	14.819	14.628	0.191	0.441	2.16	-0.261	3.13
1/7/2013	17:02:00	14.811	14.652	0.159	0.367	2.16	-0.187	2.24
1/7/2013	17:17:00	14.814	14.647	0.167	0.385	2.16	-0.205	2.46
1/7/2013	17:32:00	14.816	14.650	0.166	0.383	2.16	-0.203	2.44
1/7/2013	17:47:00	14.814	14.652	0.162	0.374	2.16	-0.194	2.32
1/7/2013	18:02:00	14.820	14.650	0.170	0.392	2.16	-0.212	2.55
1/7/2013	18:17:00	14.821	14.654	0.167	0.385	2.16	-0.205	2.46
1/7/2013	18:32:00	14.820	14.649	0.171	0.394	2.16	-0.214	2.57
1/7/2013	18:47:00	14.822	14.651	0.171	0.394	2.16	-0.214	2.57
1/7/2013	19:02:00	14.821	14.658	0.163	0.376	2.16	-0.196	2.35
1/7/2013	19:17:00	14.816	14.656	0.160	0.369	2.16	-0.189	2.27
1/7/2013	19:32:00	14.820	14.651	0.169	0.390	2.16	-0.210	2.52
1/7/2013	19:47:00	14.820	14.658	0.162	0.374	2.16	-0.194	2.32
1/7/2013	20:02:00	14.823	14.667	0.156	0.360	2.16	-0.180	2.16
1/7/2013	20:17:00	14.823	14.669	0.154	0.355	2.16	-0.175	2.10
1/7/2013	20:32:00	14.825	14.640	0.185	0.427	2.16	-0.247	2.96
1/7/2013	20:47:00	14.821	14.649	0.172	0.397	2.16	-0.217	2.60
1/7/2013	21:02:00	14.826	14.662	0.164	0.378	2.16	-0.198	2.38
1/7/2013	21:17:00	14.824	14.671	0.153	0.353	2.16	-0.173	2.08
1/7/2013	21:32:00	14.820	14.661	0.159	0.367	2.16	-0.187	2.24
1/7/2013	21:47:00	14.822	14.663	0.159	0.367	2.16	-0.187	2.24
1/7/2013	22:02:00	14.821	14.657	0.164	0.378	2.16	-0.198	2.38
1/7/2013	22:17:00	14.827	14.662	0.165	0.381	2.16	-0.201	2.41
1/7/2013	22:32:00	14.827	14.665	0.162	0.374	2.16	-0.194	2.32
1/7/2013	22:47:00	14.818	14.653	0.165	0.381	2.16	-0.201	2.41
1/7/2013	23:02:00	14.826	14.651	0.175	0.404	2.16	-0.224	2.68
1/7/2013	23:17:00	14.826	14.650	0.176	0.406	2.16	-0.226	2.71
1/7/2013	23:32:00	14.820	14.657	0.163	0.376	2.16	-0.196	2.35
1/7/2013	23:47:00	14.826	14.642	0.184	0.424	2.16	-0.244	2.93
1/8/2013	0:02:00	14.828	14.663	0.165	0.381	2.16	-0.201	2.41
1/8/2013	0:17:00	14.817	14.659	0.158	0.365	2.16	-0.185	2.21
1/8/2013	0:32:00	14.821	14.655	0.166	0.383	2.16	-0.203	2.44
1/8/2013	0:47:00	14.821	14.654	0.167	0.385	2.16	-0.205	2.46
1/8/2013	1:02:00	14.822	14.642	0.180	0.415	2.16	-0.235	2.82
1/8/2013	1:17:00	14.820	14.637	0.183	0.422	2.16	-0.242	2.91
1/8/2013	1:32:00	14.822	14.652	0.170	0.392	2.16	-0.212	2.55
1/8/2013	1:47:00	14.814	14.651	0.163	0.376	2.16	-0.196	2.35
1/8/2013	2:02:00	14.818	14.639	0.179	0.413	2.16	-0.233	2.80
1/8/2013	2:17:00	14.813	14.635	0.178	0.411	2.16	-0.231	2.77
1/8/2013	2:32:00	14.814	14.647	0.167	0.385	2.16	-0.205	2.46
1/8/2013	2:47:00	14.816	14.637	0.179	0.413	2.16	-0.233	2.80
1/8/2013	3:02:00	14.811	14.634	0.177	0.408	2.16	-0.228	2.74
1/8/2013	3:17:00	14.811	14.646	0.165	0.381	2.16	-0.201	2.41
1/8/2013	3:32:00	14.815	14.639	0.176	0.406	2.16	-0.226	2.71
1/8/2013	3:47:00	14.815	14.643	0.172	0.397	2.16	-0.217	2.60
1/8/2013	4:02:00	14.815	14.643	0.172	0.397	2.16	-0.217	2.60
1/8/2013	4:17:00	14.813	14.644	0.169	0.390	2.16	-0.210	2.52
1/8/2013	4:32:00	14.809	14.636	0.173	0.399	2.16	-0.219	2.63
1/8/2013	4:47:00	14.807	14.648	0.159	0.367	2.16	-0.187	2.24
1/8/2013	5:02:00	14.811	14.651	0.160	0.369	2.16	-0.189	2.27
1/8/2013	5:17:00	14.809	14.639	0.170	0.392	2.16	-0.212	2.55
1/8/2013	5:32:00	14.810	14.656	0.154	0.355	2.16	-0.175	2.10
1/8/2013	5:47:00	14.810	14.653	0.157	0.362	2.16	-0.182	2.19
1/8/2013	6:02:00	14.817	14.651	0.166	0.383	2.16	-0.203	2.44
1/8/2013	6:17:00	14.819	14.662	0.157	0.362	2.16	-0.182	2.19
1/8/2013	6:32:00	14.817	14.670	0.147	0.339	2.16	-0.159	1.91
1/8/2013	6:47:00	14.819	14.663	0.156	0.360	2.16	-0.180	2.16
1/8/2013	7:02:00	14.823	14.662	0.161	0.371	2.16	-0.191	2.30
1/8/2013	7:17:00	14.825	14.658	0.167	0.385	2.16	-0.205	2.46
1/8/2013	7:32:00	14.829	14.668	0.161	0.371	2.16	-0.191	2.30
1/8/2013	7:47:00	14.831	14.666	0.165	0.381	2.16	-0.201	2.41
1/8/2013	8:02:00	14.837	14.662	0.175	0.404	2.16	-0.224	2.68
1/8/2013	8:17:00	14.835	14.662	0.173	0.399	2.16	-0.219	2.63
1/8/2013	8:32:00	14.837	14.664	0.173	0.399	2.16	-0.219	2.63
1/8/2013	8:47:00	14.840	14.666	0.174	0.401	2.16	-0.221	2.66
1/8/2013	9:02:00	14.835	14.670	0.165	0.381	2.16	-0.201	2.41
1/8/2013	9:17:00	14.832	14.670	0.162	0.374	2.16	-0.194	2.32
1/8/2013	9:32:00	14.832	14.669	0.163	0.376	2.16	-0.196	2.35
1/8/2013	9:47:00	14.836	14.669	0.167	0.385	2.16	-0.205	2.46
1/8/2013	10:02:00	14.835	14.663	0.172	0.397	2.16	-0.217	2.60
1/8/2013	10:17:00	14.845	14.669	0.176	0.406	2.16	-0.226	2.71
1/8/2013	10:32:00	14.840	14.659	0.181	0.418	2.16	-0.238	2.85
1/8/2013	10:47:00	14.839	14.656	0.183	0.422	2.16	-0.242	2.91
1/8/2013	11:02:00	14.837	14.655	0.182	0.420	2.16	-0.240	2.88
1/8/2013	11:17:00	14.834	14.651	0.183	0.422	2.16	-0.242	2.91
1/8/2013	11:32:00	14.832	14.649	0.183	0.422	2.16	-0.242	2.91
1/8/2013	11:47:00	14.823	14.646	0.177	0.408	2.16	-0.228	2.74
1/8/2013	12:02:00	14.827	14.641	0.186	0.429	2.16	-0.249	2.99
1/8/2013	12:17:00	14.823	14.638	0.185	0.427	2.16	-0.247	2.96
1/8/2013	12:32:00	14.818	14.636	0.182	0.420	2.16	-0.240	2.88
1/8/2013	12:47:00	14.819	14.634	0.185	0.427	2.16	-0.247	2.96
1/8/2013	13:02:00	14.814	14.630	0.184	0.424	2.16	-0.244	2.93
1/8/2013	13:17:00	14.814	14.629	0.185	0.427	2.16	-0.247	2.96
1/8/2013	13:32:00	14.811	14.630	0.181	0.418	2.16	-0.238	2.85
1/8/2013	13:47:00	14.812	14.625	0.187	0.431	2.16	-0.251	3.02
1/8/2013	14:02:00	14.812	14.627	0.185	0.427	2.16	-0.247	2.96
1/8/2013	14:17:00	14.795	14.619	0.176	0.406	2.16	-0.226	2.71
1/8/2013	14:32:00	14.807	14.626	0.181	0.418	2.16	-0.238	2.85
1/8/2013	14:47:00	14.790	14.627	0.163	0.376	2.16	-0.196	2.35

1/8/2013	15:02:00	14.797	14.629	0.168	0.388	2.16	-0.208	2.49
1/8/2013	15:17:00	14.799	14.634	0.165	0.381	2.16	-0.201	2.41
1/8/2013	15:32:00	14.805	14.634	0.171	0.394	2.16	-0.214	2.57
1/8/2013	15:47:00	14.799	14.631	0.168	0.388	2.16	-0.208	2.49
1/8/2013	16:02:00	14.796	14.636	0.160	0.369	2.16	-0.189	2.27
1/8/2013	16:17:00	14.807	14.625	0.182	0.420	2.16	-0.240	2.88
1/8/2013	16:32:00	14.795	14.630	0.165	0.381	2.16	-0.201	2.41
1/8/2013	16:47:00	14.798	14.627	0.171	0.394	2.16	-0.214	2.57
1/8/2013	17:02:00	14.802	14.622	0.180	0.415	2.16	-0.235	2.82
1/8/2013	17:17:00	14.807	14.632	0.175	0.404	2.16	-0.224	2.68
1/8/2013	17:32:00	14.798	14.635	0.163	0.376	2.16	-0.196	2.35
1/8/2013	17:47:00	14.800	14.636	0.164	0.378	2.16	-0.198	2.38
1/8/2013	18:02:00	14.810	14.640	0.170	0.392	2.16	-0.212	2.55
1/8/2013	18:17:00	14.805	14.643	0.162	0.374	2.16	-0.194	2.32
1/8/2013	18:32:00	14.806	14.643	0.163	0.376	2.16	-0.196	2.35
1/8/2013	18:47:00	14.810	14.652	0.158	0.365	2.16	-0.185	2.21
1/8/2013	19:02:00	14.818	14.640	0.178	0.411	2.16	-0.231	2.77
1/8/2013	19:17:00	14.815	14.635	0.180	0.415	2.16	-0.235	2.82
1/8/2013	19:32:00	14.815	14.644	0.171	0.394	2.16	-0.214	2.57
1/8/2013	19:47:00	14.812	14.643	0.169	0.390	2.16	-0.210	2.52
1/8/2013	20:02:00	14.818	14.648	0.170	0.392	2.16	-0.212	2.55
1/8/2013	20:17:00	14.816	14.644	0.172	0.397	2.16	-0.217	2.60
1/8/2013	20:32:00	14.818	14.648	0.170	0.392	2.16	-0.212	2.55
1/8/2013	20:47:00	14.820	14.644	0.176	0.406	2.16	-0.226	2.71
1/8/2013	21:02:00	14.822	14.643	0.179	0.413	2.16	-0.233	2.80
1/8/2013	21:17:00	14.816	14.643	0.173	0.399	2.16	-0.219	2.63
1/8/2013	21:32:00	14.819	14.646	0.173	0.399	2.16	-0.219	2.63
1/8/2013	21:47:00	14.816	14.641	0.175	0.404	2.16	-0.224	2.68
1/8/2013	22:02:00	14.816	14.646	0.170	0.392	2.16	-0.212	2.55
1/8/2013	22:17:00	14.818	14.647	0.171	0.394	2.16	-0.214	2.57
1/8/2013	22:32:00	14.818	14.644	0.174	0.401	2.16	-0.221	2.66
1/8/2013	22:47:00	14.814	14.644	0.170	0.392	2.16	-0.212	2.55
1/8/2013	23:02:00	14.812	14.637	0.175	0.404	2.16	-0.224	2.68
1/8/2013	23:17:00	14.813	14.636	0.177	0.408	2.16	-0.228	2.74
1/8/2013	23:32:00	14.818	14.637	0.181	0.418	2.16	-0.238	2.85
1/8/2013	23:47:00	14.818	14.632	0.186	0.429	2.16	-0.249	2.99
1/9/2013	0:02:00	14.817	14.631	0.186	0.429	2.16	-0.249	2.99
1/9/2013	0:17:00	14.810	14.624	0.186	0.429	2.16	-0.249	2.99
1/9/2013	0:32:00	14.805	14.629	0.176	0.406	2.16	-0.226	2.71
1/9/2013	0:47:00	14.805	14.634	0.171	0.394	2.16	-0.214	2.57
1/9/2013	1:02:00	14.803	14.639	0.164	0.378	2.16	-0.198	2.38
1/9/2013	1:17:00	14.799	14.642	0.157	0.362	2.16	-0.182	2.19
1/9/2013	1:32:00	14.799	14.643	0.156	0.360	2.16	-0.180	2.16
1/9/2013	1:47:00	14.796	14.643	0.153	0.353	2.16	-0.173	2.08
1/9/2013	2:02:00	14.801	14.648	0.153	0.353	2.16	-0.173	2.08
1/9/2013	2:17:00	14.805	14.645	0.160	0.369	2.16	-0.189	2.27
1/9/2013	2:32:00	14.807	14.653	0.154	0.355	2.16	-0.175	2.10
1/9/2013	2:47:00	14.812	14.647	0.165	0.381	2.16	-0.201	2.41
1/9/2013	3:02:00	14.816	14.636	0.180	0.415	2.16	-0.235	2.82
1/9/2013	3:17:00	14.813	14.646	0.167	0.385	2.16	-0.205	2.46
1/9/2013	3:32:00	14.808	14.644	0.164	0.378	2.16	-0.198	2.38
1/9/2013	3:47:00	14.802	14.645	0.157	0.362	2.16	-0.182	2.19
1/9/2013	4:02:00	14.807	14.642	0.165	0.381	2.16	-0.201	2.41
1/9/2013	4:17:00	14.807	14.642	0.165	0.381	2.16	-0.201	2.41
1/9/2013	4:32:00	14.810	14.644	0.166	0.383	2.16	-0.203	2.44
1/9/2013	4:47:00	14.808	14.643	0.165	0.381	2.16	-0.201	2.41
1/9/2013	5:02:00	14.808	14.645	0.163	0.376	2.16	-0.196	2.35
1/9/2013	5:17:00	14.810	14.649	0.161	0.371	2.16	-0.191	2.30
1/9/2013	5:32:00	14.805	14.640	0.165	0.381	2.16	-0.201	2.41
1/9/2013	5:47:00	14.812	14.656	0.156	0.360	2.16	-0.180	2.16
1/9/2013	6:02:00	14.810	14.643	0.167	0.385	2.16	-0.205	2.46
1/9/2013	6:17:00	14.809	14.649	0.160	0.369	2.16	-0.189	2.27
1/9/2013	6:32:00	14.808	14.651	0.157	0.362	2.16	-0.182	2.19
1/9/2013	6:47:00	14.814	14.660	0.154	0.355	2.16	-0.175	2.10
1/9/2013	7:02:00	14.813	14.646	0.167	0.385	2.16	-0.205	2.46
1/9/2013	7:17:00	14.814	14.652	0.162	0.374	2.16	-0.194	2.32
1/9/2013	7:32:00	14.812	14.662	0.150	0.346	2.16	-0.166	1.99
1/9/2013	7:47:00	14.818	14.667	0.151	0.348	2.16	-0.168	2.02
1/9/2013	8:02:00	14.817	14.672	0.145	0.335	2.16	-0.155	1.85
1/9/2013	8:17:00	14.824	14.673	0.151	0.348	2.16	-0.168	2.02
1/9/2013	8:32:00	14.826	14.673	0.153	0.353	2.16	-0.173	2.08
1/9/2013	8:47:00	14.827	14.677	0.150	0.346	2.16	-0.166	1.99
1/9/2013	9:02:00	14.838	14.669	0.169	0.390	2.16	-0.210	2.52
1/9/2013	9:17:00	14.837	14.677	0.160	0.369	2.16	-0.189	2.27
1/9/2013	9:32:00	14.842	14.681	0.161	0.371	2.16	-0.191	2.30
1/9/2013	9:47:00	14.836	14.676	0.160	0.369	2.16	-0.189	2.27
1/9/2013	10:02:00	14.840	14.678	0.162	0.374	2.16	-0.194	2.32
1/9/2013	10:17:00	14.836	14.673	0.163	0.376	2.16	-0.196	2.35
1/9/2013	10:32:00	14.840	14.668	0.172	0.397	2.16	-0.217	2.60
1/9/2013	10:47:00	14.845	14.664	0.181	0.418	2.16	-0.238	2.85
1/9/2013	11:02:00	14.846	14.658	0.188	0.434	2.16	-0.254	3.04
1/9/2013	11:17:00	14.840	14.651	0.189	0.436	2.16	-0.256	3.07
1/9/2013	11:32:00	14.835	14.643	0.192	0.443	2.16	-0.263	3.16
1/9/2013	11:47:00	14.833	14.635	0.198	0.457	2.16	-0.277	3.32
1/9/2013	12:02:00	14.834	14.635	0.199	0.459	2.16	-0.279	3.35
1/9/2013	12:17:00	14.832	14.634	0.198	0.457	2.16	-0.277	3.32
1/9/2013	12:32:00	14.811	14.633	0.178	0.411	2.16	-0.231	2.77
1/9/2013	12:47:00	14.810	14.639	0.171	0.394	2.16	-0.214	2.57
1/9/2013	13:02:00	14.799	14.637	0.162	0.374	2.16	-0.194	2.32
1/9/2013	13:17:00	14.800	14.632	0.168	0.388	2.16	-0.208	2.49
1/9/2013	13:32:00	14.797	14.633	0.164	0.378	2.16	-0.198	2.38
1/9/2013	13:47:00	14.803	14.637	0.166	0.383	2.16	-0.203	2.44
1/9/2013	14:02:00	14.805	14.631	0.174	0.401	2.16	-0.221	2.66
1/9/2013	14:17:00	14.806	14.630	0.176	0.406	2.16	-0.226	2.71
1/9/2013	14:32:00	14.800	14.635	0.165	0.381	2.16	-0.201	2.41
1/9/2013	14:47:00	14.809	14.633	0.176	0.406	2.16	-0.226	2.71
1/9/2013	15:02:00	14.809	14.633	0.176	0.406	2.16	-0.226	2.71
1/9/2013	15:17:00	14.806	14.634	0.172	0.397	2.16	-0.217	2.60
1/9/2013	15:32:00	14.807	14.638	0.169	0.390	2.16	-0.210	2.52
1/9/2013	15:47:00	14.802	14.636	0.166	0.383	2.16	-0.203	2.44
1/9/2013	16:02:00	14.804	14.637	0.167	0.385	2.16	-0.205	2.46
1/9/2013	16:17:00	14.808	14.639	0.169	0.390	2.16	-0.210	2.52
1/9/2013	16:32:00	14.805	14.635	0.170	0.392	2.16	-0.212	2.55
1/9/2013	16:47:00	14.806	14.640	0.166	0.383	2.16	-0.203	2.44
1/9/2013	17:02:00	14.806	14.640	0.166	0.383	2.16	-0.203	2.44
1/9/2013	17:17:00	14.806	14.639	0.167	0.385	2.16	-0.205	2.46
1/9/2013	17:32:00	14.809	14.645	0.164	0.378	2.16	-0.198	2.38
1/9/2013	17:47:00	14.809	14.644	0.165	0.381	2.16	-0.201	2.41
1/9/2013	18:02:00	14.813	14.646	0.167	0.385	2.16	-0.205	2.46
1/9/2013	18:17:00	14.815	14.643	0.172	0.397	2.16	-0.217	2.60
1/9/2013	18:32:00	14.817	14.641	0.176	0.406	2.16	-0.226	2.71
1/9/2013	18:47:00	14.815	14.643	0.172	0.397	2.16	-0.217	2.60
1/9/2013	19:02:00	14.821	14.637	0.184	0.424	2.16	-0.244	2.93
1/9/2013	19:17:00	14.817	14.641	0.176	0.406	2.16	-0.226	2.71
1/9/2013	19:32:00	14.812	14.636	0.176	0.406	2.16	-0.226	2.71
1/9/2013	19:47:00	14.803	14.638	0.165	0.381	2.16	-0.201	2.41
1/9/2013	20:02:00	14.806	14.637	0.169	0.390	2.16	-0.210	2.52
1/9/2013	20:17:00	14.821	14.644	0.177	0.408	2.16	-0.228	2.74
1/9/2013	20:32:00	14.806	14.643	0.163	0.376	2.16	-0.196	2.35
1/9/2013	20:47:00	14.808	14.647	0.161	0.371	2.16	-0.191	2.30
1/9/2013	21:02:00	14.808	14.656	0.152	0.351	2.16	-0.171	2.05
1/9/2013	21:17:00	14.809	14.659	0.150	0.346	2.16	-0.166	1.99
1/9/2013	21:32:00	14.804	14.661	0.143	0.330	2.16	-0.150	1.80
1/9/2013	21:47:00	14.817	14.657	0.160	0.369	2.16	-0.189	2.27
1/9/2013	22:02:00	14.823	14.665	0.158	0.365	2.16	-0.185	2.21
1/9/2013	22:17:00	14.823	14.667	0.156	0.360	2.16	-0.180	2.16
1/9/2013	22:32:00	14.831	14.668	0.163	0.376	2.16	-0.196	2.35
1/9/2013	22:47:00	14.828	14.669	0.159	0.367	2.16	-0.187	2.24
1/9/2013	23:02:00	14.818	14.668	0.150	0.346	2.16	-0.166	1.99
1/9/2013	23:17:00	14.835	14.664	0.171	0.394	2.16	-0.214	2.57
1/9/2013	23:32:00	14.838	14.666	0.172	0.397	2.16	-0.217	2.60
1/9/2013	23:47:00	14.842	14.664	0.178	0.411	2.16	-0.231	2.77
1/10/2013	0:02:00	14.836	14.664	0.172	0.397	2.16	-0.217	2.60

1/10/2013	0:17:00	14.838	14.656	0.182	0.420	2.16	-0.240	2.88
1/10/2013	0:32:00	14.839	14.657	0.182	0.420	2.16	-0.240	2.88
1/10/2013	0:47:00	14.835	14.661	0.174	0.401	2.16	-0.221	2.66
1/10/2013	1:02:00	14.834	14.658	0.176	0.406	2.16	-0.226	2.71
1/10/2013	1:17:00	14.836	14.658	0.178	0.411	2.16	-0.231	2.77
1/10/2013	1:32:00	14.832	14.660	0.172	0.397	2.16	-0.217	2.60
1/10/2013	1:47:00	14.830	14.661	0.169	0.390	2.16	-0.210	2.52
1/10/2013	2:02:00	14.828	14.664	0.164	0.378	2.16	-0.198	2.38
1/10/2013	2:17:00	14.831	14.668	0.163	0.376	2.16	-0.196	2.35
1/10/2013	2:32:00	14.828	14.667	0.161	0.371	2.16	-0.191	2.30
1/10/2013	2:47:00	14.828	14.661	0.167	0.385	2.16	-0.205	2.46
1/10/2013	3:02:00	14.831	14.661	0.170	0.392	2.16	-0.212	2.55
1/10/2013	3:17:00	14.831	14.659	0.172	0.397	2.16	-0.217	2.60
1/10/2013	3:32:00	14.834	14.665	0.169	0.390	2.16	-0.210	2.52
1/10/2013	3:47:00	14.829	14.646	0.183	0.422	2.16	-0.242	2.91
1/10/2013	4:02:00	14.829	14.651	0.178	0.411	2.16	-0.231	2.77
1/10/2013	4:17:00	14.828	14.663	0.165	0.381	2.16	-0.201	2.41
1/10/2013	4:32:00	14.826	14.667	0.159	0.367	2.16	-0.187	2.24
1/10/2013	4:47:00	14.827	14.664	0.163	0.376	2.16	-0.196	2.35
1/10/2013	5:02:00	14.824	14.665	0.159	0.367	2.16	-0.187	2.24
1/10/2013	5:17:00	14.826	14.669	0.157	0.362	2.16	-0.182	2.19
1/10/2013	5:32:00	14.828	14.671	0.157	0.362	2.16	-0.182	2.19
1/10/2013	5:47:00	14.830	14.677	0.153	0.353	2.16	-0.173	2.08
1/10/2013	6:02:00	14.830	14.683	0.147	0.339	2.16	-0.159	1.91
1/10/2013	6:17:00	14.837	14.686	0.151	0.348	2.16	-0.168	2.02
1/10/2013	6:32:00	14.839	14.689	0.150	0.346	2.16	-0.166	1.99
1/10/2013	6:47:00	14.843	14.690	0.153	0.353	2.16	-0.173	2.08
1/10/2013	7:02:00	14.838	14.694	0.144	0.332	2.16	-0.152	1.83
1/10/2013	7:17:00	14.848	14.704	0.144	0.332	2.16	-0.152	1.83
1/10/2013	7:32:00	14.853	14.692	0.161	0.371	2.16	-0.191	2.30
1/10/2013	7:47:00	14.854	14.691	0.163	0.376	2.16	-0.196	2.35
1/10/2013	8:02:00	14.854	14.696	0.158	0.365	2.16	-0.185	2.21
1/10/2013	8:17:00	14.859	14.699	0.160	0.369	2.16	-0.189	2.27
1/10/2013	8:32:00	14.861	14.695	0.166	0.383	2.16	-0.203	2.44
1/10/2013	8:47:00	14.857	14.700	0.157	0.362	2.16	-0.182	2.19
1/10/2013	9:02:00	14.864	14.700	0.164	0.378	2.16	-0.198	2.38
1/10/2013	9:17:00	14.859	14.694	0.165	0.381	2.16	-0.201	2.41
1/10/2013	9:32:00	14.865	14.694	0.171	0.394	2.16	-0.214	2.57
1/10/2013	9:47:00	14.863	14.696	0.167	0.385	2.16	-0.205	2.46
1/10/2013	10:02:00	14.864	14.686	0.178	0.411	2.16	-0.231	2.77
1/10/2013	10:17:00	14.859	14.689	0.170	0.392	2.16	-0.212	2.55
1/10/2013	10:32:00	14.863	14.683	0.180	0.415	2.16	-0.235	2.82
1/10/2013	10:47:00	14.856	14.680	0.176	0.406	2.16	-0.226	2.71
1/10/2013	11:02:00	14.859	14.676	0.183	0.422	2.16	-0.242	2.91
1/10/2013	11:17:00	14.851	14.674	0.177	0.408	2.16	-0.228	2.74
1/10/2013	11:32:00	14.854	14.670	0.184	0.424	2.16	-0.244	2.93
1/10/2013	11:47:00	14.841	14.666	0.175	0.404	2.16	-0.224	2.68
1/10/2013	12:02:00	14.843	14.666	0.177	0.408	2.16	-0.228	2.74
1/10/2013	12:17:00	14.838	14.658	0.180	0.415	2.16	-0.235	2.82
1/10/2013	12:32:00	14.827	14.662	0.165	0.381	2.16	-0.201	2.41
1/10/2013	12:47:00	14.835	14.663	0.172	0.397	2.16	-0.217	2.60
1/10/2013	13:02:00	14.833	14.654	0.179	0.413	2.16	-0.233	2.80
1/10/2013	13:17:00	14.823	14.653	0.170	0.392	2.16	-0.212	2.55
1/10/2013	13:32:00	14.829	14.657	0.172	0.397	2.16	-0.217	2.60
1/10/2013	13:47:00	14.828	14.658	0.170	0.392	2.16	-0.212	2.55
1/10/2013	14:02:00	14.827	14.653	0.174	0.401	2.16	-0.221	2.66
1/10/2013	14:17:00	14.822	14.654	0.168	0.388	2.16	-0.208	2.49
1/10/2013	14:32:00	14.823	14.651	0.172	0.397	2.16	-0.217	2.60
1/10/2013	14:47:00	14.824	14.656	0.168	0.388	2.16	-0.208	2.49
1/10/2013	15:02:00	14.819	14.657	0.162	0.374	2.16	-0.194	2.32
1/10/2013	15:17:00	14.817	14.654	0.163	0.376	2.16	-0.196	2.35
1/10/2013	15:32:00	14.819	14.657	0.162	0.374	2.16	-0.194	2.32
1/10/2013	15:47:00	14.817	14.657	0.160	0.369	2.16	-0.189	2.27
1/10/2013	16:02:00	14.824	14.655	0.169	0.390	2.16	-0.210	2.52
1/10/2013	16:17:00	14.821	14.654	0.167	0.385	2.16	-0.205	2.46
1/10/2013	16:32:00	14.822	14.654	0.168	0.388	2.16	-0.208	2.49
1/10/2013	16:47:00	14.823	14.656	0.167	0.385	2.16	-0.205	2.46
1/10/2013	17:02:00	14.823	14.659	0.164	0.378	2.16	-0.198	2.38
1/10/2013	17:17:00	14.820	14.656	0.164	0.378	2.16	-0.198	2.38
1/10/2013	17:32:00	14.823	14.662	0.161	0.371	2.16	-0.191	2.30
1/10/2013	17:47:00	14.826	14.659	0.167	0.385	2.16	-0.205	2.46
1/10/2013	18:02:00	14.827	14.658	0.169	0.390	2.16	-0.210	2.52
1/10/2013	18:17:00	14.824	14.661	0.163	0.376	2.16	-0.196	2.35
1/10/2013	18:32:00	14.827	14.654	0.173	0.399	2.16	-0.219	2.63
1/10/2013	18:47:00	14.828	14.659	0.169	0.390	2.16	-0.210	2.52
1/10/2013	19:02:00	14.823	14.655	0.168	0.388	2.16	-0.208	2.49
1/10/2013	19:17:00	14.824	14.653	0.171	0.394	2.16	-0.214	2.57
1/10/2013	19:32:00	14.810	14.653	0.157	0.362	2.16	-0.182	2.19
1/10/2013	19:47:00	14.829	14.649	0.180	0.415	2.16	-0.235	2.82
1/10/2013	20:02:00	14.815	14.655	0.160	0.369	2.16	-0.189	2.27
1/10/2013	20:17:00	14.825	14.649	0.176	0.406	2.16	-0.226	2.71
1/10/2013	20:32:00	14.832	14.651	0.181	0.418	2.16	-0.238	2.85
1/10/2013	20:47:00	14.826	14.648	0.178	0.411	2.16	-0.231	2.77
1/10/2013	21:02:00	14.819	14.650	0.169	0.390	2.16	-0.210	2.52
1/10/2013	21:17:00	14.821	14.640	0.181	0.418	2.16	-0.238	2.85
1/10/2013	21:32:00	14.817	14.646	0.171	0.394	2.16	-0.214	2.57
1/10/2013	21:47:00	14.820	14.644	0.176	0.406	2.16	-0.226	2.71
1/10/2013	22:02:00	14.817	14.648	0.169	0.390	2.16	-0.210	2.52
1/10/2013	22:17:00	14.817	14.646	0.171	0.394	2.16	-0.214	2.57
1/10/2013	22:32:00	14.805	14.643	0.162	0.374	2.16	-0.194	2.32
1/10/2013	22:47:00	14.817	14.633	0.184	0.424	2.16	-0.244	2.93
1/10/2013	23:02:00	14.813	14.638	0.175	0.404	2.16	-0.224	2.68
1/10/2013	23:17:00	14.806	14.634	0.172	0.397	2.16	-0.217	2.60
1/10/2013	23:32:00	14.811	14.629	0.182	0.420	2.16	-0.240	2.88
1/10/2013	23:47:00	14.813	14.633	0.180	0.415	2.16	-0.235	2.82
1/11/2013	0:02:00	14.800	14.627	0.173	0.399	2.16	-0.219	2.63
1/11/2013	0:17:00	14.808	14.622	0.186	0.429	2.16	-0.249	2.99
1/11/2013	0:32:00	14.800	14.626	0.174	0.401	2.16	-0.221	2.66
1/11/2013	0:47:00	14.796	14.625	0.171	0.394	2.16	-0.214	2.57
1/11/2013	1:02:00	14.793	14.626	0.167	0.385	2.16	-0.205	2.46
1/11/2013	1:17:00	14.799	14.627	0.172	0.397	2.16	-0.217	2.60
1/11/2013	1:32:00	14.789	14.626	0.163	0.376	2.16	-0.196	2.35
1/11/2013	1:47:00	14.796	14.623	0.173	0.399	2.16	-0.219	2.63
1/11/2013	2:02:00	14.793	14.621	0.172	0.397	2.16	-0.217	2.60
1/11/2013	2:17:00	14.794	14.616	0.178	0.411	2.16	-0.231	2.77
1/11/2013	2:32:00	14.794	14.614	0.180	0.415	2.16	-0.235	2.82
1/11/2013	2:47:00	14.790	14.607	0.183	0.422	2.16	-0.242	2.91
1/11/2013	3:02:00	14.788	14.607	0.181	0.418	2.16	-0.238	2.85
1/11/2013	3:17:00	14.783	14.609	0.174	0.401	2.16	-0.221	2.66
1/11/2013	3:32:00	14.778	14.603	0.175	0.404	2.16	-0.224	2.68
1/11/2013	3:47:00	14.780	14.602	0.178	0.411	2.16	-0.231	2.77
1/11/2013	4:02:00	14.773	14.604	0.169	0.390	2.16	-0.210	2.52
1/11/2013	4:17:00	14.769	14.602	0.167	0.385	2.16	-0.205	2.46
1/11/2013	4:32:00	14.770	14.592	0.178	0.411	2.16	-0.231	2.77
1/11/2013	4:47:00	14.770	14.600	0.170	0.392	2.16	-0.212	2.55
1/11/2013	5:02:00	14.766	14.600	0.166	0.383	2.16	-0.203	2.44
1/11/2013	5:17:00	14.766	14.597	0.169	0.390	2.16	-0.210	2.52
1/11/2013	5:32:00	14.764	14.608	0.156	0.360	2.16	-0.180	2.16
1/11/2013	5:47:00	14.758	14.609	0.149	0.344	2.16	-0.164	1.96
1/11/2013	6:02:00	14.766	14.609	0.157	0.362	2.16	-0.182	2.19
1/11/2013	6:17:00	14.764	14.609	0.155	0.358	2.16	-0.178	2.13
1/11/2013	6:32:00	14.770	14.609	0.161	0.371	2.16	-0.191	2.30
1/11/2013	6:47:00	14.773	14.598	0.175	0.404	2.16	-0.224	2.68
1/11/2013	7:02:00	14.777	14.604	0.173	0.399	2.16	-0.219	2.63
1/11/2013	7:17:00	14.775	14.599	0.176	0.406	2.16	-0.226	2.71
1/11/2013	7:32:00	14.776	14.606	0.170	0.392	2.16	-0.212	2.55
1/11/2013	7:47:00	14.771	14.603	0.168	0.388	2.16	-0.208	2.49
1/11/2013	8:02:00	14.767	14.617	0.150	0.346	2.16	-0.166	1.99
1/11/2013	8:17:00	14.770	14.615	0.155	0.358	2.16	-0.178	2.13
1/11/2013	8:32:00	14.772	14.610	0.162	0.374	2.16	-0.194	2.32
1/11/2013	8:47:00	14.773	14.608	0.165	0.381	2.16	-0.201	2.41
1/11/2013	9:02:00	14.777	14.607	0.170	0.392	2.16	-0.212	2.55
1/11/2013	9:17:00	14.777	14.606	0.171	0.394	2.16	-0.214	2.57

1/11/2013	9:32:00	14.780	14.600	0.180	0.415	2.16	-0.235	2.82
1/11/2013	9:47:00	14.776	14.597	0.179	0.413	2.16	-0.233	2.80
1/11/2013	10:02:00	14.773	14.597	0.176	0.406	2.16	-0.226	2.71
1/11/2013	10:17:00	14.767	14.593	0.174	0.401	2.16	-0.221	2.66
1/11/2013	10:32:00	14.770	14.589	0.181	0.418	2.16	-0.238	2.85
1/11/2013	10:47:00	14.770	14.582	0.188	0.434	2.16	-0.254	3.04
1/11/2013	11:02:00	14.764	14.580	0.184	0.424	2.16	-0.244	2.93
1/11/2013	11:17:00	14.760	14.578	0.182	0.420	2.16	-0.240	2.88
1/11/2013	11:32:00	14.759	14.577	0.182	0.420	2.16	-0.240	2.88
1/11/2013	11:47:00	14.750	14.571	0.179	0.413	2.16	-0.233	2.80
1/11/2013	12:02:00	14.751	14.568	0.183	0.422	2.16	-0.242	2.91
1/11/2013	12:17:00	14.745	14.560	0.185	0.427	2.16	-0.247	2.96
1/11/2013	12:32:00	14.739	14.561	0.178	0.411	2.16	-0.231	2.77
1/11/2013	12:47:00	14.735	14.562	0.173	0.399	2.16	-0.219	2.63
1/11/2013	13:02:00	14.730	14.553	0.177	0.408	2.16	-0.228	2.74
1/11/2013	13:17:00	14.725	14.546	0.179	0.413	2.16	-0.233	2.80
1/11/2013	13:32:00	14.719	14.549	0.170	0.392	2.16	-0.212	2.55
1/11/2013	13:47:00	14.717	14.547	0.170	0.392	2.16	-0.212	2.55
1/11/2013	14:02:00	14.733	14.548	0.185	0.427	2.16	-0.247	2.96
1/11/2013	14:17:00	14.716	14.549	0.167	0.385	2.16	-0.205	2.46
1/11/2013	14:32:00	14.710	14.547	0.163	0.376	2.16	-0.196	2.35
1/11/2013	14:47:00	14.721	14.546	0.175	0.404	2.16	-0.224	2.68
1/11/2013	15:02:00	14.715	14.546	0.169	0.390	2.16	-0.210	2.52
1/11/2013	15:17:00	14.712	14.555	0.157	0.362	2.16	-0.182	2.19
1/11/2013	15:32:00	14.712	14.542	0.170	0.392	2.16	-0.212	2.55
1/11/2013	15:47:00	14.711	14.543	0.168	0.388	2.16	-0.208	2.49
1/11/2013	16:02:00	14.717	14.545	0.172	0.397	2.16	-0.217	2.60
1/11/2013	16:17:00	14.715	14.538	0.177	0.408	2.16	-0.228	2.74
1/11/2013	16:32:00	14.719	14.537	0.182	0.420	2.16	-0.240	2.88
1/11/2013	16:47:00	14.712	14.546	0.166	0.383	2.16	-0.203	2.44
1/11/2013	17:02:00	14.708	14.541	0.167	0.385	2.16	-0.205	2.46
1/11/2013	17:17:00	14.710	14.545	0.165	0.381	2.16	-0.201	2.41
1/11/2013	17:32:00	14.697	14.544	0.153	0.353	2.16	-0.173	2.08
1/11/2013	17:47:00	14.711	14.541	0.170	0.392	2.16	-0.212	2.55
1/11/2013	18:02:00	14.714	14.536	0.178	0.411	2.16	-0.231	2.77
1/11/2013	18:17:00	14.700	14.543	0.157	0.362	2.16	-0.182	2.19
1/11/2013	18:32:00	14.712	14.546	0.166	0.383	2.16	-0.203	2.44
1/11/2013	18:47:00	14.706	14.540	0.166	0.383	2.16	-0.203	2.44
1/11/2013	19:02:00	14.698	14.547	0.151	0.348	2.16	-0.168	2.02
1/11/2013	19:17:00	14.701	14.539	0.162	0.374	2.16	-0.194	2.32
1/11/2013	19:32:00	14.705	14.541	0.164	0.378	2.16	-0.198	2.38
1/11/2013	19:47:00	14.711	14.540	0.171	0.394	2.16	-0.214	2.57
1/11/2013	20:02:00	14.716	14.540	0.176	0.406	2.16	-0.226	2.71
1/11/2013	20:17:00	14.704	14.543	0.161	0.371	2.16	-0.191	2.30
1/11/2013	20:32:00	14.708	14.541	0.167	0.385	2.16	-0.205	2.46
1/11/2013	20:47:00	14.711	14.547	0.164	0.378	2.16	-0.198	2.38
1/11/2013	21:02:00	14.707	14.543	0.164	0.378	2.16	-0.198	2.38
1/11/2013	21:17:00	14.703	14.550	0.153	0.353	2.16	-0.173	2.08
1/11/2013	21:32:00	14.717	14.542	0.175	0.404	2.16	-0.224	2.68
1/11/2013	21:47:00	14.698	14.541	0.157	0.362	2.16	-0.182	2.19
1/11/2013	22:02:00	14.714	14.537	0.177	0.408	2.16	-0.228	2.74
1/11/2013	22:17:00	14.705	14.538	0.167	0.385	2.16	-0.205	2.46
1/11/2013	22:32:00	14.703	14.533	0.170	0.392	2.16	-0.212	2.55
1/11/2013	22:47:00	14.708	14.534	0.174	0.401	2.16	-0.221	2.66
1/11/2013	23:02:00	14.711	14.533	0.178	0.411	2.16	-0.231	2.77
1/11/2013	23:17:00	14.702	14.531	0.171	0.394	2.16	-0.214	2.57
1/11/2013	23:32:00	14.707	14.532	0.175	0.404	2.16	-0.224	2.68
1/11/2013	23:47:00	14.702	14.529	0.173	0.399	2.16	-0.219	2.63
1/12/2013	0:02:00	14.702	14.533	0.169	0.390	2.16	-0.210	2.52
1/12/2013	0:17:00	14.694	14.530	0.164	0.378	2.16	-0.198	2.38
1/12/2013	0:32:00	14.693	14.528	0.165	0.381	2.16	-0.201	2.41
1/12/2013	0:47:00	14.692	14.530	0.162	0.374	2.16	-0.194	2.32
1/12/2013	1:02:00	14.693	14.532	0.161	0.371	2.16	-0.191	2.30
1/12/2013	1:17:00	14.694	14.541	0.153	0.353	2.16	-0.173	2.08
1/12/2013	1:32:00	14.696	14.534	0.162	0.374	2.16	-0.194	2.32
1/12/2013	1:47:00	14.688	14.549	0.139	0.321	2.16	-0.141	1.69
1/12/2013	2:02:00	14.698	14.535	0.163	0.376	2.16	-0.196	2.35
1/12/2013	2:17:00	14.698	14.530	0.168	0.388	2.16	-0.208	2.49
1/12/2013	2:32:00	14.697	14.527	0.170	0.392	2.16	-0.212	2.55
1/12/2013	2:47:00	14.695	14.526	0.169	0.390	2.16	-0.210	2.52
1/12/2013	3:02:00	14.699	14.522	0.177	0.408	2.16	-0.228	2.74
1/12/2013	3:17:00	14.696	14.520	0.176	0.406	2.16	-0.226	2.71
1/12/2013	3:32:00	14.693	14.519	0.174	0.401	2.16	-0.221	2.66
1/12/2013	3:47:00	14.694	14.523	0.171	0.394	2.16	-0.214	2.57
1/12/2013	4:02:00	14.693	14.522	0.171	0.394	2.16	-0.214	2.57
1/12/2013	4:17:00	14.687	14.512	0.175	0.404	2.16	-0.224	2.68
1/12/2013	4:32:00	14.686	14.519	0.167	0.385	2.16	-0.205	2.46
1/12/2013	4:47:00	14.680	14.516	0.164	0.378	2.16	-0.198	2.38
1/12/2013	5:02:00	14.682	14.520	0.162	0.374	2.16	-0.194	2.32
1/12/2013	5:17:00	14.684	14.524	0.160	0.369	2.16	-0.189	2.27
1/12/2013	5:32:00	14.680	14.522	0.158	0.365	2.16	-0.185	2.21
1/12/2013	5:47:00	14.679	14.524	0.155	0.358	2.16	-0.178	2.13
1/12/2013	6:02:00	14.678	14.525	0.153	0.353	2.16	-0.173	2.08
1/12/2013	6:17:00	14.689	14.529	0.160	0.369	2.16	-0.189	2.27
1/12/2013	6:32:00	14.687	14.525	0.162	0.374	2.16	-0.194	2.32
1/12/2013	6:47:00	14.696	14.528	0.168	0.388	2.16	-0.208	2.49
1/12/2013	7:02:00	14.691	14.536	0.155	0.358	2.16	-0.178	2.13
1/12/2013	7:17:00	14.689	14.536	0.153	0.353	2.16	-0.173	2.08
1/12/2013	7:32:00	14.696	14.539	0.157	0.362	2.16	-0.182	2.19
1/12/2013	7:47:00	14.699	14.538	0.161	0.371	2.16	-0.191	2.30
1/12/2013	8:02:00	14.703	14.541	0.162	0.374	2.16	-0.194	2.32
1/12/2013	8:17:00	14.704	14.544	0.160	0.369	2.16	-0.189	2.27
1/12/2013	8:32:00	14.696	14.540	0.156	0.360	2.16	-0.180	2.16
1/12/2013	8:47:00	14.703	14.544	0.159	0.367	2.16	-0.187	2.24
1/12/2013	9:02:00	14.699	14.540	0.159	0.367	2.16	-0.187	2.24
1/12/2013	9:17:00	14.704	14.542	0.162	0.374	2.16	-0.194	2.32
1/12/2013	9:32:00	14.703	14.540	0.163	0.376	2.16	-0.196	2.35
1/12/2013	9:47:00	14.708	14.539	0.169	0.390	2.16	-0.210	2.52
1/12/2013	10:02:00	14.709	14.540	0.169	0.390	2.16	-0.210	2.52
1/12/2013	10:17:00	14.722	14.538	0.184	0.424	2.16	-0.244	2.93
1/12/2013	10:32:00	14.707	14.532	0.175	0.404	2.16	-0.224	2.68
1/12/2013	10:47:00	14.708	14.530	0.178	0.411	2.16	-0.231	2.77
1/12/2013	11:02:00	14.702	14.527	0.175	0.404	2.16	-0.224	2.68
1/12/2013	11:17:00	14.704	14.525	0.179	0.413	2.16	-0.233	2.80
1/12/2013	11:32:00	14.698	14.520	0.178	0.411	2.16	-0.231	2.77
1/12/2013	11:47:00	14.699	14.517	0.182	0.420	2.16	-0.240	2.88
1/12/2013	12:02:00	14.695	14.516	0.179	0.413	2.16	-0.233	2.80
1/12/2013	12:17:00	14.694	14.517	0.177	0.408	2.16	-0.228	2.74
1/12/2013	12:32:00	14.691	14.519	0.172	0.397	2.16	-0.217	2.60
1/12/2013	12:47:00	14.689	14.513	0.176	0.406	2.16	-0.226	2.71
1/12/2013	13:02:00	14.687	14.508	0.179	0.413	2.16	-0.233	2.80
1/12/2013	13:17:00	14.682	14.513	0.169	0.390	2.16	-0.210	2.52
1/12/2013	13:32:00	14.682	14.514	0.168	0.388	2.16	-0.208	2.49
1/12/2013	13:47:00	14.678	14.510	0.168	0.388	2.16	-0.208	2.49
1/12/2013	14:02:00	14.679	14.513	0.166	0.383	2.16	-0.203	2.44
1/12/2013	14:17:00	14.680	14.515	0.165	0.381	2.16	-0.201	2.41
1/12/2013	14:32:00	14.682	14.517	0.165	0.381	2.16	-0.201	2.41
1/12/2013	14:47:00	14.678	14.510	0.168	0.388	2.16	-0.208	2.49
1/12/2013	15:02:00	14.684	14.515	0.169	0.390	2.16	-0.210	2.52
1/12/2013	15:17:00	14.678	14.509	0.169	0.390	2.16	-0.210	2.52
1/12/2013	15:32:00	14.679	14.513	0.166	0.383	2.16	-0.203	2.44
1/12/2013	15:47:00	14.677	14.509	0.168	0.388	2.16	-0.208	2.49
1/12/2013	16:02:00	14.678	14.511	0.167	0.385	2.16	-0.205	2.46
1/12/2013	16:17:00	14.680	14.512	0.168	0.388	2.16	-0.208	2.49
1/12/2013	16:32:00	14.684	14.512	0.172	0.397	2.16	-0.217	2.60
1/12/2013	16:47:00	14.683	14.509	0.174	0.401	2.16	-0.221	2.66
1/12/2013	17:02:00	14.680	14.510	0.170	0.392	2.16	-0.212	2.55
1/12/2013	17:17:00	14.682	14.510	0.172	0.397	2.16	-0.217	2.60
1/12/2013	17:32:00	14.680	14.507	0.173	0.399	2.16	-0.219	2.63
1/12/2013	17:47:00	14.680	14.509	0.171	0.394	2.16	-0.214	2.57
1/12/2013	18:02:00	14.679	14.510	0.169	0.390	2.16	-0.210	2.52
1/12/2013	18:17:00	14.677	14.505	0.172	0.397	2.16	-0.217	2.60
1/12/2013	18:32:00	14.679	14.504	0.175	0.404	2.16	-0.224	2.68

1/12/2013	18:47:00	14.676	14.503	0.173	0.399	2.16	-0.219	2.63
1/12/2013	19:02:00	14.677	14.503	0.174	0.401	2.16	-0.221	2.66
1/12/2013	19:17:00	14.671	14.501	0.170	0.392	2.16	-0.212	2.55
1/12/2013	19:32:00	14.674	14.507	0.167	0.385	2.16	-0.205	2.46
1/12/2013	19:47:00	14.667	14.506	0.161	0.371	2.16	-0.191	2.30
1/12/2013	20:02:00	14.670	14.503	0.167	0.385	2.16	-0.205	2.46
1/12/2013	20:17:00	14.671	14.506	0.165	0.381	2.16	-0.201	2.41
1/12/2013	20:32:00	14.672	14.505	0.167	0.385	2.16	-0.205	2.46
1/12/2013	20:47:00	14.672	14.509	0.163	0.376	2.16	-0.196	2.35
1/12/2013	21:02:00	14.676	14.511	0.165	0.381	2.16	-0.201	2.41
1/12/2013	21:17:00	14.669	14.512	0.157	0.362	2.16	-0.182	2.19
1/12/2013	21:32:00	14.673	14.504	0.169	0.390	2.16	-0.210	2.52
1/12/2013	21:47:00	14.674	14.506	0.168	0.388	2.16	-0.208	2.49
1/12/2013	22:02:00	14.674	14.511	0.163	0.376	2.16	-0.196	2.35
1/12/2013	22:17:00	14.676	14.508	0.168	0.388	2.16	-0.208	2.49
1/12/2013	22:32:00	14.675	14.511	0.164	0.378	2.16	-0.198	2.38
1/12/2013	22:47:00	14.670	14.504	0.166	0.383	2.16	-0.203	2.44
1/12/2013	23:02:00	14.691	14.501	0.190	0.438	2.16	-0.258	3.10
1/12/2013	23:17:00	14.672	14.503	0.169	0.390	2.16	-0.210	2.52
1/12/2013	23:32:00	14.670	14.505	0.165	0.381	2.16	-0.201	2.41
1/12/2013	23:47:00	14.657	14.503	0.154	0.355	2.16	-0.175	2.10
1/13/2013	0:02:00	14.673	14.508	0.165	0.381	2.16	-0.201	2.41
1/13/2013	0:17:00	14.676	14.506	0.170	0.392	2.16	-0.212	2.55
1/13/2013	0:32:00	14.665	14.505	0.160	0.369	2.16	-0.189	2.27
1/13/2013	0:47:00	14.669	14.503	0.166	0.383	2.16	-0.203	2.44
1/13/2013	1:02:00	14.670	14.506	0.164	0.378	2.16	-0.198	2.38
1/13/2013	1:17:00	14.658	14.510	0.148	0.341	2.16	-0.161	1.94
1/13/2013	1:32:00	14.661	14.504	0.157	0.362	2.16	-0.182	2.19
1/13/2013	1:47:00	14.666	14.508	0.158	0.365	2.16	-0.185	2.21
1/13/2013	2:02:00	14.676	14.509	0.167	0.385	2.16	-0.205	2.46
1/13/2013	2:17:00	14.669	14.505	0.164	0.378	2.16	-0.198	2.38
1/13/2013	2:32:00	14.672	14.505	0.167	0.385	2.16	-0.205	2.46
1/13/2013	2:47:00	14.664	14.493	0.171	0.394	2.16	-0.214	2.57
1/13/2013	3:02:00	14.665	14.501	0.164	0.378	2.16	-0.198	2.38
1/13/2013	3:17:00	14.669	14.500	0.169	0.390	2.16	-0.210	2.52
1/13/2013	3:32:00	14.676	14.502	0.174	0.401	2.16	-0.221	2.66
1/13/2013	3:47:00	14.668	14.495	0.173	0.399	2.16	-0.219	2.63
1/13/2013	4:02:00	14.671	14.496	0.175	0.404	2.16	-0.224	2.68
1/13/2013	4:17:00	14.667	14.498	0.169	0.390	2.16	-0.210	2.52
1/13/2013	4:32:00	14.667	14.502	0.165	0.381	2.16	-0.201	2.41
1/13/2013	4:47:00	14.662	14.505	0.157	0.362	2.16	-0.182	2.19
1/13/2013	5:02:00	14.671	14.504	0.167	0.385	2.16	-0.205	2.46
1/13/2013	5:17:00	14.666	14.507	0.159	0.367	2.16	-0.187	2.24
1/13/2013	5:32:00	14.667	14.509	0.158	0.365	2.16	-0.185	2.21
1/13/2013	5:47:00	14.671	14.507	0.164	0.378	2.16	-0.198	2.38
1/13/2013	6:02:00	14.663	14.509	0.154	0.355	2.16	-0.175	2.10
1/13/2013	6:17:00	14.672	14.510	0.162	0.374	2.16	-0.194	2.32
1/13/2013	6:32:00	14.676	14.514	0.162	0.374	2.16	-0.194	2.32
1/13/2013	6:47:00	14.675	14.522	0.153	0.353	2.16	-0.173	2.08
1/13/2013	7:02:00	14.671	14.520	0.151	0.348	2.16	-0.168	2.02
1/13/2013	7:17:00	14.679	14.521	0.158	0.365	2.16	-0.185	2.21
1/13/2013	7:32:00	14.678	14.525	0.153	0.353	2.16	-0.173	2.08
1/13/2013	7:47:00	14.683	14.529	0.154	0.355	2.16	-0.175	2.10
1/13/2013	8:02:00	14.680	14.525	0.155	0.358	2.16	-0.178	2.13
1/13/2013	8:17:00	14.674	14.526	0.148	0.341	2.16	-0.161	1.94
1/13/2013	8:32:00	14.692	14.532	0.160	0.369	2.16	-0.189	2.27
1/13/2013	8:47:00	14.685	14.534	0.151	0.348	2.16	-0.168	2.02
1/13/2013	9:02:00	14.688	14.532	0.156	0.360	2.16	-0.180	2.16
1/13/2013	9:17:00	14.696	14.531	0.165	0.381	2.16	-0.201	2.41
1/13/2013	9:32:00	14.704	14.525	0.179	0.413	2.16	-0.233	2.80
1/13/2013	9:47:00	14.706	14.522	0.184	0.424	2.16	-0.244	2.93
1/13/2013	10:02:00	14.699	14.522	0.177	0.408	2.16	-0.228	2.74
1/13/2013	10:17:00	14.706	14.517	0.189	0.436	2.16	-0.256	3.07
1/13/2013	10:32:00	14.698	14.513	0.185	0.427	2.16	-0.247	2.96
1/13/2013	10:47:00	14.694	14.510	0.184	0.424	2.16	-0.244	2.93
1/13/2013	11:02:00	14.687	14.507	0.180	0.415	2.16	-0.235	2.82
1/13/2013	11:17:00	14.684	14.502	0.182	0.420	2.16	-0.240	2.88
1/13/2013	11:32:00	14.681	14.500	0.181	0.418	2.16	-0.238	2.85
1/13/2013	11:47:00	14.677	14.497	0.180	0.415	2.16	-0.235	2.82
1/13/2013	12:02:00	14.675	14.498	0.177	0.408	2.16	-0.228	2.74
1/13/2013	12:17:00	14.674	14.489	0.185	0.427	2.16	-0.247	2.96
1/13/2013	12:32:00	14.673	14.485	0.188	0.434	2.16	-0.254	3.04
1/13/2013	12:47:00	14.662	14.483	0.179	0.413	2.16	-0.233	2.80
1/13/2013	13:02:00	14.662	14.489	0.173	0.399	2.16	-0.219	2.63
1/13/2013	13:17:00	14.658	14.488	0.170	0.392	2.16	-0.212	2.55
1/13/2013	13:32:00	14.655	14.490	0.165	0.381	2.16	-0.201	2.41
1/13/2013	13:47:00	14.658	14.483	0.175	0.404	2.16	-0.224	2.68
1/13/2013	14:02:00	14.659	14.492	0.167	0.385	2.16	-0.205	2.46
1/13/2013	14:17:00	14.658	14.491	0.167	0.385	2.16	-0.205	2.46
1/13/2013	14:32:00	14.660	14.490	0.170	0.392	2.16	-0.212	2.55
1/13/2013	14:47:00	14.655	14.494	0.161	0.371	2.16	-0.191	2.30
1/13/2013	15:02:00	14.658	14.496	0.162	0.374	2.16	-0.194	2.32
1/13/2013	15:17:00	14.659	14.496	0.163	0.376	2.16	-0.196	2.35
1/13/2013	15:32:00	14.655	14.497	0.158	0.365	2.16	-0.185	2.21
1/13/2013	15:47:00	14.660	14.493	0.167	0.385	2.16	-0.205	2.46
1/13/2013	16:02:00	14.667	14.493	0.174	0.401	2.16	-0.221	2.66
1/13/2013	16:17:00	14.667	14.498	0.169	0.390	2.16	-0.210	2.52
1/13/2013	16:32:00	14.664	14.494	0.170	0.392	2.16	-0.212	2.55
1/13/2013	16:47:00	14.666	14.495	0.171	0.394	2.16	-0.214	2.57
1/13/2013	17:02:00	14.661	14.490	0.171	0.394	2.16	-0.214	2.57
1/13/2013	17:17:00	14.661	14.490	0.171	0.394	2.16	-0.214	2.57
1/13/2013	17:32:00	14.657	14.493	0.164	0.378	2.16	-0.198	2.38
1/13/2013	17:47:00	14.662	14.494	0.168	0.388	2.16	-0.208	2.49
1/13/2013	18:02:00	14.667	14.493	0.174	0.401	2.16	-0.221	2.66
1/13/2013	18:17:00	14.665	14.494	0.171	0.394	2.16	-0.214	2.57
1/13/2013	18:32:00	14.665	14.495	0.170	0.392	2.16	-0.212	2.55
1/13/2013	18:47:00	14.663	14.496	0.167	0.385	2.16	-0.205	2.46
1/13/2013	19:02:00	14.665	14.493	0.172	0.397	2.16	-0.217	2.60
1/13/2013	19:17:00	14.668	14.495	0.173	0.399	2.16	-0.219	2.63
1/13/2013	19:32:00	14.666	14.497	0.169	0.390	2.16	-0.210	2.52
1/13/2013	19:47:00	14.661	14.497	0.164	0.378	2.16	-0.198	2.38
1/13/2013	20:02:00	14.664	14.497	0.167	0.385	2.16	-0.205	2.46
1/13/2013	20:17:00	14.663	14.493	0.170	0.392	2.16	-0.212	2.55
1/13/2013	20:32:00	14.666	14.498	0.168	0.388	2.16	-0.208	2.49
1/13/2013	20:47:00	14.660	14.502	0.158	0.365	2.16	-0.185	2.21
1/13/2013	21:02:00	14.663	14.503	0.160	0.369	2.16	-0.189	2.27
1/13/2013	21:17:00	14.668	14.501	0.167	0.385	2.16	-0.205	2.46
1/13/2013	21:32:00	14.668	14.502	0.166	0.383	2.16	-0.203	2.44
1/13/2013	21:47:00	14.662	14.501	0.161	0.371	2.16	-0.191	2.30
1/13/2013	22:02:00	14.665	14.499	0.166	0.383	2.16	-0.203	2.44
1/13/2013	22:17:00	14.663	14.497	0.166	0.383	2.16	-0.203	2.44
1/13/2013	22:32:00	14.668	14.500	0.168	0.388	2.16	-0.208	2.49
1/13/2013	22:47:00	14.669	14.501	0.168	0.388	2.16	-0.208	2.49
1/13/2013	23:02:00	14.672	14.507	0.165	0.381	2.16	-0.201	2.41
1/13/2013	23:17:00	14.665	14.502	0.163	0.376	2.16	-0.196	2.35
1/13/2013	23:32:00	14.666	14.501	0.165	0.381	2.16	-0.201	2.41
1/13/2013	23:47:00	14.670	14.500	0.170	0.392	2.16	-0.212	2.55
1/14/2013	0:02:00	14.675	14.503	0.172	0.397	2.16	-0.217	2.60
1/14/2013	0:17:00	14.673	14.508	0.165	0.381	2.16	-0.201	2.41
1/14/2013	0:32:00	14.667	14.505	0.162	0.374	2.16	-0.194	2.32
1/14/2013	0:47:00	14.671	14.504	0.167	0.385	2.16	-0.205	2.46
1/14/2013	1:02:00	14.670	14.508	0.162	0.374	2.16	-0.194	2.32
1/14/2013	1:17:00	14.668	14.510	0.158	0.365	2.16	-0.185	2.21
1/14/2013	1:32:00	14.673	14.510	0.163	0.376	2.16	-0.196	2.35
1/14/2013	1:47:00	14.677	14.513	0.164	0.378	2.16	-0.198	2.38
1/14/2013	2:02:00	14.669	14.505	0.164	0.378	2.16	-0.198	2.38
1/14/2013	2:17:00	14.673	14.512	0.161	0.371	2.16	-0.191	2.30
1/14/2013	2:32:00	14.673	14.507	0.166	0.383	2.16	-0.203	2.44
1/14/2013	2:47:00	14.668	14.506	0.162	0.374	2.16	-0.194	2.32
1/14/2013	3:02:00	14.679	14.507	0.172	0.397	2.16	-0.217	2.60
1/14/2013	3:17:00	14.676	14.506	0.170	0.392	2.16	-0.212	2.55
1/14/2013	3:32:00	14.670	14.496	0.174	0.401	2.16	-0.221	2.66
1/14/2013	3:47:00	14.681	14.505	0.176	0.406	2.16	-0.226	2.71

1/14/2013	4:02:00	14.674	14.500	0.174	0.401	2.16	-0.221	2.66
1/14/2013	4:17:00	14.671	14.502	0.169	0.390	2.16	-0.210	2.52
1/14/2013	4:32:00	14.671	14.498	0.173	0.399	2.16	-0.219	2.63
1/14/2013	4:47:00	14.665	14.502	0.163	0.376	2.16	-0.196	2.35
1/14/2013	5:02:00	14.657	14.501	0.156	0.360	2.16	-0.180	2.16
1/14/2013	5:17:00	14.656	14.505	0.151	0.348	2.16	-0.168	2.02
1/14/2013	5:32:00	14.659	14.507	0.152	0.351	2.16	-0.171	2.05
1/14/2013	5:47:00	14.660	14.506	0.154	0.355	2.16	-0.175	2.10
1/14/2013	6:02:00	14.654	14.508	0.146	0.337	2.16	-0.157	1.88
1/14/2013	6:17:00	14.671	14.514	0.157	0.362	2.16	-0.182	2.19
1/14/2013	6:32:00	14.670	14.513	0.157	0.362	2.16	-0.182	2.19
1/14/2013	6:47:00	14.661	14.518	0.143	0.330	2.16	-0.150	1.80
1/14/2013	7:02:00	14.665	14.519	0.146	0.337	2.16	-0.157	1.88
1/14/2013	7:17:00	14.666	14.517	0.149	0.344	2.16	-0.164	1.96
1/14/2013	7:32:00	14.677	14.520	0.157	0.362	2.16	-0.182	2.19
1/14/2013	7:47:00	14.680	14.527	0.153	0.353	2.16	-0.173	2.08
1/14/2013	8:02:00	14.676	14.529	0.147	0.339	2.16	-0.159	1.91
1/14/2013	8:17:00	14.685	14.526	0.159	0.367	2.16	-0.187	2.24
1/14/2013	8:32:00	14.684	14.528	0.156	0.360	2.16	-0.180	2.16
1/14/2013	8:47:00	14.684	14.529	0.155	0.358	2.16	-0.178	2.13
1/14/2013	9:02:00	14.681	14.523	0.158	0.365	2.16	-0.185	2.21
1/14/2013	9:17:00	14.685	14.522	0.163	0.376	2.16	-0.196	2.35
1/14/2013	9:32:00	14.692	14.528	0.164	0.378	2.16	-0.198	2.38
1/14/2013	9:47:00	14.694	14.526	0.168	0.388	2.16	-0.208	2.49
1/14/2013	10:02:00	14.691	14.523	0.168	0.388	2.16	-0.208	2.49
1/14/2013	10:17:00	14.689	14.519	0.170	0.392	2.16	-0.212	2.55
1/14/2013	10:32:00	14.692	14.510	0.182	0.420	2.16	-0.240	2.88
1/14/2013	10:47:00	14.694	14.512	0.182	0.420	2.16	-0.240	2.88
1/14/2013	11:02:00	14.689	14.511	0.178	0.411	2.16	-0.231	2.77
1/14/2013	11:17:00	14.689	14.500	0.189	0.436	2.16	-0.256	3.07
1/14/2013	11:32:00	14.683	14.503	0.180	0.415	2.16	-0.235	2.82
1/14/2013	11:47:00	14.682	14.500	0.182	0.420	2.16	-0.240	2.88
1/14/2013	12:02:00	14.677	14.500	0.177	0.408	2.16	-0.228	2.74
1/14/2013	12:17:00	14.675	14.497	0.178	0.411	2.16	-0.231	2.77
1/14/2013	12:32:00	14.671	14.496	0.175	0.404	2.16	-0.224	2.68
1/14/2013	12:47:00	14.665	14.490	0.175	0.404	2.16	-0.224	2.68
1/14/2013	13:02:00	14.665	14.495	0.170	0.392	2.16	-0.212	2.55
1/14/2013	13:17:00	14.666	14.487	0.179	0.413	2.16	-0.233	2.80
1/14/2013	13:32:00	14.665	14.489	0.176	0.406	2.16	-0.226	2.71
1/14/2013	13:47:00	14.659	14.488	0.171	0.394	2.16	-0.214	2.57
1/14/2013	14:02:00	14.655	14.495	0.160	0.369	2.16	-0.189	2.27
1/14/2013	14:17:00	14.660	14.498	0.162	0.374	2.16	-0.194	2.32
1/14/2013	14:32:00	14.655	14.496	0.159	0.367	2.16	-0.187	2.24
1/14/2013	14:47:00	14.657	14.500	0.157	0.362	2.16	-0.182	2.19
1/14/2013	15:02:00	14.664	14.498	0.166	0.383	2.16	-0.203	2.44
1/14/2013	15:17:00	14.663	14.502	0.161	0.371	2.16	-0.191	2.30
1/14/2013	15:32:00	14.664	14.502	0.162	0.374	2.16	-0.194	2.32
1/14/2013	15:47:00	14.668	14.505	0.163	0.376	2.16	-0.196	2.35
1/14/2013	16:02:00	14.668	14.505	0.163	0.376	2.16	-0.196	2.35
1/14/2013	16:17:00	14.670	14.508	0.162	0.374	2.16	-0.194	2.32
1/14/2013	16:32:00	14.674	14.510	0.164	0.378	2.16	-0.198	2.38
1/14/2013	16:47:00	14.671	14.510	0.161	0.371	2.16	-0.191	2.30
1/14/2013	17:02:00	14.676	14.503	0.173	0.399	2.16	-0.219	2.63
1/14/2013	17:17:00	14.676	14.516	0.160	0.369	2.16	-0.189	2.27
1/14/2013	17:32:00	14.680	14.510	0.170	0.392	2.16	-0.212	2.55
1/14/2013	17:47:00	14.675	14.513	0.162	0.374	2.16	-0.194	2.32
1/14/2013	18:02:00	14.677	14.515	0.162	0.374	2.16	-0.194	2.32
1/14/2013	18:17:00	14.681	14.508	0.173	0.399	2.16	-0.219	2.63
1/14/2013	18:32:00	14.684	14.512	0.172	0.397	2.16	-0.217	2.60
1/14/2013	18:47:00	14.684	14.512	0.172	0.397	2.16	-0.217	2.60
1/14/2013	19:02:00	14.682	14.517	0.165	0.381	2.16	-0.201	2.41
1/14/2013	19:17:00	14.683	14.509	0.174	0.401	2.16	-0.221	2.66
1/14/2013	19:32:00	14.678	14.509	0.169	0.390	2.16	-0.210	2.52
1/14/2013	19:47:00	14.678	14.511	0.167	0.385	2.16	-0.205	2.46
1/14/2013	20:02:00	14.683	14.509	0.174	0.401	2.16	-0.221	2.66
1/14/2013	20:17:00	14.686	14.507	0.179	0.413	2.16	-0.233	2.80
1/14/2013	20:32:00	14.682	14.505	0.177	0.408	2.16	-0.228	2.74
1/14/2013	20:47:00	14.680	14.505	0.175	0.404	2.16	-0.224	2.68
1/14/2013	21:02:00	14.680	14.506	0.174	0.401	2.16	-0.221	2.66
1/14/2013	21:17:00	14.671	14.503	0.168	0.388	2.16	-0.208	2.49
1/14/2013	21:32:00	14.672	14.507	0.165	0.381	2.16	-0.201	2.41
1/14/2013	21:47:00	14.673	14.509	0.164	0.378	2.16	-0.198	2.38
1/14/2013	22:02:00	14.677	14.507	0.170	0.392	2.16	-0.212	2.55
1/14/2013	22:17:00	14.677	14.505	0.172	0.397	2.16	-0.217	2.60
1/14/2013	22:32:00	14.673	14.513	0.160	0.369	2.16	-0.189	2.27
1/14/2013	22:47:00	14.674	14.507	0.167	0.385	2.16	-0.205	2.46
1/14/2013	23:02:00	14.682	14.515	0.167	0.385	2.16	-0.205	2.46
1/14/2013	23:17:00	14.678	14.510	0.168	0.388	2.16	-0.208	2.49
1/14/2013	23:32:00	14.677	14.509	0.168	0.388	2.16	-0.208	2.49
1/14/2013	23:47:00	14.681	14.507	0.174	0.401	2.16	-0.221	2.66
1/15/2013	0:02:00	14.684	14.510	0.174	0.401	2.16	-0.221	2.66
1/15/2013	0:17:00	14.685	14.510	0.175	0.404	2.16	-0.224	2.68
1/15/2013	0:32:00	14.682	14.508	0.174	0.401	2.16	-0.221	2.66
1/15/2013	0:47:00	14.683	14.507	0.176	0.406	2.16	-0.226	2.71
1/15/2013	1:02:00	14.676	14.509	0.167	0.385	2.16	-0.205	2.46
1/15/2013	1:17:00	14.678	14.511	0.167	0.385	2.16	-0.205	2.46
1/15/2013	1:32:00	14.679	14.509	0.170	0.392	2.16	-0.212	2.55
1/15/2013	1:47:00	14.685	14.505	0.180	0.415	2.16	-0.235	2.82
1/15/2013	2:02:00	14.682	14.514	0.168	0.388	2.16	-0.208	2.49
1/15/2013	2:17:00	14.686	14.509	0.177	0.408	2.16	-0.228	2.74
1/15/2013	2:32:00	14.679	14.507	0.172	0.397	2.16	-0.217	2.60
1/15/2013	2:47:00	14.674	14.504	0.170	0.392	2.16	-0.212	2.55
1/15/2013	3:02:00	14.683	14.503	0.180	0.415	2.16	-0.235	2.82
1/15/2013	3:17:00	14.682	14.502	0.180	0.415	2.16	-0.235	2.82
1/15/2013	3:32:00	14.679	14.498	0.181	0.418	2.16	-0.238	2.85
1/15/2013	3:47:00	14.676	14.503	0.173	0.399	2.16	-0.219	2.63
1/15/2013	4:02:00	14.674	14.501	0.173	0.399	2.16	-0.219	2.63
1/15/2013	4:17:00	14.672	14.498	0.174	0.401	2.16	-0.221	2.66
1/15/2013	4:32:00	14.671	14.493	0.178	0.411	2.16	-0.231	2.77
1/15/2013	4:47:00	14.669	14.496	0.173	0.399	2.16	-0.219	2.63
1/15/2013	5:02:00	14.668	14.494	0.174	0.401	2.16	-0.221	2.66
1/15/2013	5:17:00	14.659	14.498	0.161	0.371	2.16	-0.191	2.30
1/15/2013	5:32:00	14.667	14.494	0.173	0.399	2.16	-0.219	2.63
1/15/2013	5:47:00	14.667	14.504	0.163	0.376	2.16	-0.196	2.35
1/15/2013	6:02:00	14.665	14.505	0.160	0.369	2.16	-0.189	2.27
1/15/2013	6:17:00	14.660	14.506	0.154	0.355	2.16	-0.175	2.10
1/15/2013	6:32:00	14.661	14.515	0.146	0.337	2.16	-0.157	1.88
1/15/2013	6:47:00	14.669	14.521	0.148	0.341	2.16	-0.161	1.94
1/15/2013	7:02:00	14.678	14.528	0.150	0.346	2.16	-0.166	1.99
1/15/2013	7:17:00	14.674	14.526	0.148	0.341	2.16	-0.161	1.94
1/15/2013	7:32:00	14.686	14.531	0.155	0.358	2.16	-0.178	2.13
1/15/2013	7:47:00	14.685	14.535	0.150	0.346	2.16	-0.166	1.99
1/15/2013	8:02:00	14.695	14.536	0.159	0.367	2.16	-0.187	2.24
1/15/2013	8:17:00	14.690	14.536	0.154	0.355	2.16	-0.175	2.10
1/15/2013	8:32:00	14.698	14.541	0.157	0.362	2.16	-0.182	2.19
1/15/2013	8:47:00	14.686	14.537	0.149	0.344	2.16	-0.164	1.96
1/15/2013	9:02:00	14.699	14.545	0.154	0.355	2.16	-0.175	2.10
1/15/2013	9:17:00	14.692	14.541	0.151	0.348	2.16	-0.168	2.02
1/15/2013	9:32:00	14.708	14.538	0.170	0.392	2.16	-0.212	2.55
1/15/2013	9:47:00	14.706	14.544	0.162	0.374	2.16	-0.194	2.32
1/15/2013	10:02:00	14.715	14.539	0.176	0.406	2.16	-0.226	2.71
1/15/2013	10:17:00	14.699	14.533	0.166	0.383	2.16	-0.203	2.44
1/15/2013	10:32:00	14.709	14.530	0.179	0.413	2.16	-0.233	2.80
1/15/2013	10:47:00	14.693	14.529	0.164	0.378	2.16	-0.198	2.38
1/15/2013	11:02:00	14.706	14.527	0.179	0.413	2.16	-0.233	2.80
1/15/2013	11:17:00	14.710	14.523	0.187	0.431	2.16	-0.251	3.02
1/15/2013	11:32:00	14.691	14.510	0.181	0.418	2.16	-0.238	2.85
1/15/2013	11:47:00	14.716	14.513	0.203	0.468	2.16	-0.288	3.46
1/15/2013	12:02:00	14.699	14.511	0.188	0.434	2.16	-0.254	3.04
1/15/2013	12:17:00	14.683	14.509	0.174	0.401	2.16	-0.221	2.66
1/15/2013	12:32:00	14.697	14.501	0.196	0.452	2.16	-0.272	3.27
1/15/2013	12:47:00	14.684	14.501	0.183	0.422	2.16	-0.242	2.91
1/15/2013	13:02:00	14.677	14.504	0.173	0.399	2.16	-0.219	2.63

1/15/2013	13:17:00	14.673	14.501	0.172	0.397	2.16	-0.217	2.60	
1/15/2013	13:32:00	14.670	14.497	0.173	0.399	2.16	-0.219	2.63	
1/15/2013	13:47:00	14.681	14.501	0.180	0.415	2.16	-0.235	2.82	
1/15/2013	14:02:00	14.666	14.499	0.167	0.385	2.16	-0.205	2.46	
1/15/2013	14:17:00	14.667	14.500	0.167	0.385	2.16	-0.205	2.46	
1/15/2013	14:32:00	14.667	14.497	0.170	0.392	2.16	-0.212	2.55	
1/15/2013	14:47:00	14.673	14.501	0.172	0.397	2.16	-0.217	2.60	
1/15/2013	15:02:00	14.667	14.502	0.165	0.381	2.16	-0.201	2.41	
1/15/2013	15:17:00	14.665	14.503	0.162	0.374	2.16	-0.194	2.32	
1/15/2013	15:32:00	14.665	14.504	0.161	0.371	2.16	-0.191	2.30	
1/15/2013	15:47:00	14.662	14.505	0.157	0.362	2.16	-0.182	2.19	
1/15/2013	16:02:00	14.661	14.497	0.164	0.378	2.16	-0.198	2.38	
1/15/2013	16:17:00	14.667	14.500	0.167	0.385	2.16	-0.205	2.46	
1/15/2013	16:32:00	14.675	14.504	0.171	0.394	2.16	-0.214	2.57	
1/15/2013	16:47:00	14.675	14.498	0.177	0.408	2.16	-0.228	2.74	
1/15/2013	17:02:00	14.665	14.501	0.164	0.378	2.16	-0.198	2.38	
1/15/2013	17:17:00	14.680	14.493	0.187	0.431	2.16	-0.251	3.02	
1/15/2013	17:32:00	14.656	14.513	0.143	0.330	2.16	-0.150	1.80	
1/15/2013	17:47:00	14.683	14.505	0.178	0.411	2.16	-0.231	2.77	
1/15/2013	18:02:00	14.669	14.505	0.164	0.378	2.16	-0.198	2.38	
1/15/2013	18:17:00	14.689	14.500	0.189	0.436	2.16	-0.256	3.07	
1/15/2013	18:32:00	14.669	14.504	0.165	0.381	2.16	-0.201	2.41	
1/15/2013	18:47:00	14.675	14.500	0.175	0.404	2.16	-0.224	2.68	
1/15/2013	19:02:00	14.668	14.500	0.168	0.388	2.16	-0.208	2.49	
1/15/2013	19:17:00	14.674	14.500	0.174	0.401	2.16	-0.221	2.66	
1/15/2013	19:32:00	14.672	14.498	0.174	0.401	2.16	-0.221	2.66	
1/15/2013	19:47:00	14.671	14.497	0.174	0.401	2.16	-0.221	2.66	
1/15/2013	20:02:00	14.669	14.493	0.176	0.406	2.16	-0.226	2.71	
1/15/2013	20:17:00	14.676	14.490	0.186	0.429	2.16	-0.249	2.99	
1/15/2013	20:32:00	14.668	14.490	0.178	0.411	2.16	-0.231	2.77	
1/15/2013	20:47:00	14.669	14.485	0.184	0.424	2.16	-0.244	2.93	
1/15/2013	21:02:00	14.655	14.480	0.175	0.404	2.16	-0.224	2.68	
1/15/2013	21:17:00	14.662	14.482	0.180	0.415	2.16	-0.235	2.82	
1/15/2013	21:32:00	14.656	14.482	0.174	0.401	2.16	-0.221	2.66	
1/15/2013	21:47:00	14.656	14.487	0.169	0.390	2.16	-0.210	2.52	
1/15/2013	22:02:00	14.652	14.485	0.167	0.385	2.16	-0.205	2.46	
1/15/2013	22:17:00	14.649	14.481	0.168	0.388	2.16	-0.208	2.49	
1/15/2013	22:32:00	14.644	14.479	0.165	0.381	2.16	-0.201	2.41	
1/15/2013	22:47:00	14.650	14.473	0.177	0.408	2.16	-0.228	2.74	
1/15/2013	23:02:00	14.650	14.475	0.175	0.404	2.16	-0.224	2.68	1E-08
1/15/2013	23:17:00	14.644	14.475	0.169	0.390	2.16	-0.210	2.52	1.6
1/15/2013	23:32:00	14.651	14.477	0.174	0.401	2.16	-0.221	2.66	1.6
1/15/2013	23:47:00	14.637	14.479	0.158	0.365	2.16	-0.185	2.21	1.6
1/16/2013	0:02:00	14.645	14.474	0.171	0.394	2.16	-0.214	2.57	1.6
1/16/2013	0:17:00	14.639	14.470	0.169	0.390	2.16	-0.210	2.52	1.6
1/16/2013	0:32:00	14.641	14.466	0.175	0.404	2.16	-0.224	2.68	1.6
1/16/2013	0:47:00	14.644	14.471	0.173	0.399	2.16	-0.219	2.63	1.6
1/16/2013	1:02:00	14.639	14.474	0.165	0.381	2.16	-0.201	2.41	1.6
1/16/2013	1:17:00	14.641	14.470	0.171	0.394	2.16	-0.214	2.57	1.6
1/16/2013	1:32:00	14.631	14.471	0.160	0.369	2.16	-0.189	2.27	1.6
1/16/2013	1:47:00	14.636	14.478	0.158	0.365	2.16	-0.185	2.21	1.6
1/16/2013	2:02:00	14.634	14.468	0.166	0.383	2.16	-0.203	2.44	1.6
1/16/2013	2:17:00	14.641	14.463	0.178	0.411	2.16	-0.231	2.77	1.6
1/16/2013	2:32:00	14.635	14.464	0.171	0.394	2.16	-0.214	2.57	1.6
1/16/2013	2:47:00	14.640	14.454	0.186	0.429	2.16	-0.249	2.99	1.6
1/16/2013	3:02:00	14.637	14.459	0.178	0.411	2.16	-0.231	2.77	1.6
1/16/2013	3:17:00	14.632	14.457	0.175	0.404	2.16	-0.224	2.68	1.6
1/16/2013	3:32:00	14.628	14.455	0.173	0.399	2.16	-0.219	2.63	1.6
1/16/2013	3:47:00	14.627	14.459	0.168	0.388	2.16	-0.208	2.49	1.6
1/16/2013	4:02:00	14.620	14.458	0.162	0.374	2.16	-0.194	2.32	1.6
1/16/2013	4:17:00	14.624	14.450	0.174	0.401	2.16	-0.221	2.66	1.6
1/16/2013	4:32:00	14.624	14.453	0.171	0.394	2.16	-0.214	2.57	1.6
1/16/2013	4:47:00	14.629	14.453	0.176	0.406	2.16	-0.226	2.71	1.6
1/16/2013	5:02:00	14.624	14.459	0.165	0.381	2.16	-0.201	2.41	1.6
1/16/2013	5:17:00	14.621	14.457	0.164	0.378	2.16	-0.198	2.38	1.6
1/16/2013	5:32:00	14.623	14.455	0.168	0.388	2.16	-0.208	2.49	1.6
1/16/2013	5:47:00	14.620	14.458	0.162	0.374	2.16	-0.194	2.32	1.6
1/16/2013	6:02:00	14.623	14.459	0.164	0.378	2.16	-0.198	2.38	1.6
1/16/2013	6:17:00	14.622	14.456	0.166	0.383	2.16	-0.203	2.44	1.6
1/16/2013	6:32:00	14.625	14.461	0.164	0.378	2.16	-0.198	2.38	1.6
1/16/2013	6:47:00	14.624	14.460	0.164	0.378	2.16	-0.198	2.38	1.6
1/16/2013	7:02:00	14.627	14.469	0.158	0.365	2.16	-0.185	2.21	1.6
1/16/2013	7:17:00	14.625	14.464	0.161	0.371	2.16	-0.191	2.30	1.6
1/16/2013	7:32:00	14.627	14.464	0.163	0.376	2.16	-0.196	2.35	1.6
1/16/2013	7:47:00	14.630	14.469	0.161	0.371	2.16	-0.191	2.30	1.6
1/16/2013	8:02:00	14.630	14.466	0.164	0.378	2.16	-0.198	2.38	1.6
1/16/2013	8:17:00	14.631	14.470	0.161	0.371	2.16	-0.191	2.30	1.6
1/16/2013	8:32:00	14.626	14.474	0.152	0.351	2.16	-0.171	2.05	1.6
1/16/2013	8:47:00	14.630	14.470	0.160	0.369	2.16	-0.189	2.27	1.6
1/16/2013	9:02:00	14.636	14.475	0.161	0.371	2.16	-0.191	2.30	1.6
1/16/2013	9:17:00	14.638	14.469	0.169	0.390	2.16	-0.210	2.52	1.6
1/16/2013	9:32:00	14.634	14.469	0.165	0.381	2.16	-0.201	2.41	1.6
1/16/2013	9:47:00	14.638	14.458	0.180	0.415	2.16	-0.235	2.82	1.6
1/16/2013	10:02:00	14.635	14.467	0.168	0.388	2.16	-0.208	2.49	1.6
1/16/2013	10:17:00	14.634	14.454	0.180	0.415	2.16	-0.235	2.82	1.6
1/16/2013	10:32:00	14.636	14.455	0.181	0.418	2.16	-0.238	2.85	1.6
1/16/2013	10:47:00	14.642	14.453	0.189	0.436	2.16	-0.256	3.07	1.6
1/16/2013	11:02:00	14.628	14.449	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	11:17:00	14.626	14.448	0.178	0.411	2.16	-0.231	2.77	1.6
1/16/2013	11:32:00	14.628	14.449	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	11:47:00	14.617	14.454	0.163	0.376	2.16	-0.196	2.35	1.6
1/16/2013	12:02:00	14.619	14.454	0.165	0.381	2.16	-0.201	2.41	1.6
1/16/2013	12:17:00	14.613	14.454	0.159	0.367	2.16	-0.187	2.24	1.6
1/16/2013	12:32:00	14.621	14.459	0.162	0.374	2.16	-0.194	2.32	1.6
1/16/2013	12:47:00	14.619	14.463	0.156	0.360	2.16	-0.180	2.16	1.6
1/16/2013	13:02:00	14.626	14.447	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	13:17:00	14.628	14.453	0.175	0.404	2.16	-0.224	2.68	1.6
1/16/2013	13:32:00	14.627	14.459	0.168	0.388	2.16	-0.208	2.49	1.6
1/16/2013	13:47:00	14.635	14.443	0.192	0.443	2.16	-0.263	3.16	1.6
1/16/2013	14:02:00	14.634	14.455	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	14:17:00	14.631	14.456	0.175	0.404	2.16	-0.224	2.68	1.6
1/16/2013	14:32:00	14.641	14.448	0.193	0.445	2.16	-0.265	3.18	1.6
1/16/2013	14:47:00	14.642	14.450	0.192	0.443	2.16	-0.263	3.16	1.6
1/16/2013	15:02:00	14.643	14.462	0.181	0.418	2.16	-0.238	2.85	1.6
1/16/2013	15:17:00	14.641	14.440	0.201	0.464	2.16	-0.284	3.40	1.6
1/16/2013	15:32:00	14.643	14.439	0.204	0.471	2.16	-0.291	3.49	1.6
1/16/2013	15:47:00	14.645	14.437	0.208	0.480	2.16	-0.300	3.60	1.6
1/16/2013	16:02:00	14.640	14.447	0.193	0.445	2.16	-0.265	3.18	1.6
1/16/2013	16:17:00	14.645	14.452	0.193	0.445	2.16	-0.265	3.18	1.6
1/16/2013	16:32:00	14.638	14.451	0.187	0.431	2.16	-0.251	3.02	1.6
1/16/2013	16:47:00	14.634	14.470	0.164	0.378	2.16	-0.198	2.38	1.6
1/16/2013	17:02:00	14.636	14.464	0.172	0.397	2.16	-0.217	2.60	1.6
1/16/2013	17:17:00	14.634	14.453	0.181	0.418	2.16	-0.238	2.85	1.6
1/16/2013	17:32:00	14.641	14.460	0.181	0.418	2.16	-0.238	2.85	1.6
1/16/2013	17:47:00	14.637	14.456	0.181	0.418	2.16	-0.238	2.85	1.6
1/16/2013	18:02:00	14.632	14.439	0.193	0.445	2.16	-0.265	3.18	1.6
1/16/2013	18:17:00	14.631	14.447	0.184	0.424	2.16	-0.244	2.93	1.6
1/16/2013	18:32:00	14.629	14.444	0.185	0.427	2.16	-0.247	2.96	1.6
1/16/2013	18:47:00	14.630	14.451	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	19:02:00	14.629	14.454	0.175	0.404	2.16	-0.224	2.68	1.6
1/16/2013	19:17:00	14.624	14.450	0.174	0.401	2.16	-0.221	2.66	1.6
1/16/2013	19:32:00	14.627	14.448	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	19:47:00	14.629	14.454	0.175	0.404	2.16	-0.224	2.68	1.6
1/16/2013	20:02:00	14.629	14.451	0.178	0.411	2.16	-0.231	2.77	1.6
1/16/2013	20:17:00	14.625	14.454	0.171	0.394	2.16	-0.214	2.57	1.6
1/16/2013	20:32:00	14.626	14.447	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	20:47:00	14.624	14.442	0.182	0.420	2.16	-0.240	2.88	1.6
1/16/2013	21:02:00	14.627	14.448	0.179	0.413	2.16	-0.233	2.80	1.6
1/16/2013	21:17:00	14.624	14.450	0.174	0.401	2.16	-0.221	2.66	1.6
1/16/2013	21:32:00	14.638	14.444	0.194	0.448	2.16	-0.268	3.21	1.6
1/16/2013	21:47:00	14.665	14.446	0.219	0.505	2.16	-0.325	3.90	1.6
1/16/2013	22:02:00	14.679	14.448	0.231	0.533	2.16	-0.353	4.24	1.6
1/16/2013	22:17:00	14.690	14.450	0.240	0.554	2.16	-0.374	4.48	1.6

1/16/2013	22:32:00	14.700	14.444	0.256	0.591	2.16	-0.411	4.93	1.6
1/16/2013	22:47:00	14.710	14.441	0.269	0.621	2.16	-0.441	5.29	1.6
1/16/2013	23:02:00	14.713	14.442	0.271	0.625	2.16	-0.445	5.34	1.6
1/16/2013	23:17:00	14.707	14.442	0.265	0.611	2.16	-0.431	5.18	1.6
1/16/2013	23:32:00	14.720	14.442	0.278	0.641	2.16	-0.461	5.54	1.6
1/16/2013	23:47:00	14.730	14.440	0.290	0.669	2.16	-0.489	5.87	1.6
1/17/2013	0:02:00	14.737	14.440	0.297	0.685	2.16	-0.505	6.06	1.6
1/17/2013	0:17:00	14.764	14.437	0.327	0.754	2.16	-0.574	6.89	1.6
1/17/2013	0:32:00	14.794	14.439	0.355	0.819	2.16	-0.639	7.67	1.6
1/17/2013	0:47:00	14.826	14.438	0.388	0.895	2.16	-0.715	8.58	1.6
1/17/2013	1:02:00	14.860	14.437	0.423	0.976	2.16	-0.796	9.55	1.6
1/17/2013	1:17:00	14.889	14.436	0.453	1.045	2.16	-0.865	10.38	1.6
1/17/2013	1:32:00	14.885	14.435	0.450	1.038	2.16	-0.858	10.30	1.6
1/17/2013	1:47:00	14.873	14.438	0.435	1.004	2.16	-0.824	9.88	1.6
1/17/2013	2:02:00	14.854	14.434	0.420	0.969	2.16	-0.789	9.47	1.6
1/17/2013	2:17:00	14.833	14.434	0.399	0.920	2.16	-0.740	8.89	1.6
1/17/2013	2:32:00	14.819	14.428	0.391	0.902	2.16	-0.722	8.66	1.6
1/17/2013	2:47:00	14.800	14.424	0.376	0.867	2.16	-0.687	8.25	1.6
1/17/2013	3:02:00	14.790	14.426	0.364	0.840	2.16	-0.660	7.92	1.6
1/17/2013	3:17:00	14.781	14.423	0.358	0.826	2.16	-0.646	7.75	1.6
1/17/2013	3:32:00	14.779	14.424	0.355	0.819	2.16	-0.639	7.67	1.6
1/17/2013	3:47:00	14.772	14.425	0.347	0.801	2.16	-0.621	7.45	1.6
1/17/2013	4:02:00	14.765	14.423	0.342	0.789	2.16	-0.609	7.31	1.6
1/17/2013	4:17:00	14.762	14.423	0.339	0.782	2.16	-0.602	7.22	1.6
1/17/2013	4:32:00	14.753	14.424	0.329	0.759	2.16	-0.579	6.95	1.6
1/17/2013	4:47:00	14.746	14.424	0.322	0.743	2.16	-0.563	6.75	1.6
1/17/2013	5:02:00	14.736	14.428	0.308	0.711	2.16	-0.531	6.37	1.6
1/17/2013	5:17:00	14.731	14.426	0.305	0.704	2.16	-0.524	6.28	1.6
1/17/2013	5:32:00	14.729	14.428	0.301	0.694	2.16	-0.514	6.17	1.6
1/17/2013	5:47:00	14.729	14.432	0.297	0.685	2.16	-0.505	6.06	1.6
1/17/2013	6:02:00	14.724	14.437	0.287	0.662	2.16	-0.482	5.79	1.6
1/17/2013	6:17:00	14.720	14.430	0.290	0.669	2.16	-0.489	5.87	1.6
1/17/2013	6:32:00	14.716	14.433	0.283	0.653	2.16	-0.473	5.67	1.6
1/17/2013	6:47:00	14.719	14.431	0.288	0.664	2.16	-0.484	5.81	1.6
1/17/2013	7:02:00	14.727	14.431	0.296	0.683	2.16	-0.503	6.03	1.6
1/17/2013	7:17:00	14.726	14.435	0.291	0.671	2.16	-0.491	5.90	1.6
1/17/2013	7:32:00	14.723	14.435	0.288	0.664	2.16	-0.484	5.81	1.6
1/17/2013	7:47:00	14.726	14.436	0.290	0.669	2.16	-0.489	5.87	1.6
1/17/2013	8:02:00	14.723	14.439	0.284	0.655	2.16	-0.475	5.70	1.6
1/17/2013	8:17:00	14.724	14.437	0.287	0.662	2.16	-0.482	5.79	1.6
1/17/2013	8:32:00	14.729	14.438	0.291	0.671	2.16	-0.491	5.90	1.6
1/17/2013	8:47:00	14.722	14.437	0.285	0.657	2.16	-0.477	5.73	1.6
1/17/2013	9:02:00	14.725	14.441	0.284	0.655	2.16	-0.475	5.70	1.6
1/17/2013	9:17:00	14.726	14.439	0.287	0.662	2.16	-0.482	5.79	1.6
1/17/2013	9:32:00	14.729	14.433	0.296	0.683	2.16	-0.503	6.03	1.6
1/17/2013	9:47:00	14.732	14.428	0.304	0.701	2.16	-0.521	6.26	1.6
1/17/2013	10:02:00	14.754	14.427	0.327	0.754	2.16	-0.574	6.89	1.6
1/17/2013	10:17:00	14.775	14.424	0.351	0.810	2.16	-0.630	7.56	1.6
1/17/2013	10:32:00	14.792	14.426	0.366	0.844	2.16	-0.664	7.97	1.6
1/17/2013	10:47:00	14.838	14.426	0.412	0.950	2.16	-0.770	9.25	1.6
1/17/2013	11:02:00	14.881	14.414	0.467	1.077	2.16	-0.897	10.77	1.6
1/17/2013	11:17:00	14.901	14.404	0.497	1.147	2.16	-0.967	11.60	1.6
1/17/2013	11:32:00	14.902	14.384	0.518	1.195	2.16	-1.015	12.18	1.6
1/17/2013	11:47:00	14.892	14.386	0.506	1.167	2.16	-0.987	11.85	1.6
1/17/2013	12:02:00	14.866	14.390	0.476	1.098	2.16	-0.918	11.02	1.6
1/17/2013	12:17:00	14.844	14.377	0.467	1.077	2.16	-0.897	10.77	1.6
1/17/2013	12:32:00	14.813	14.384	0.429	0.990	2.16	-0.810	9.72	1.6
1/17/2013	12:47:00	14.792	14.362	0.430	0.992	2.16	-0.812	9.74	1.6
1/17/2013	13:02:00	14.774	14.363	0.411	0.948	2.16	-0.768	9.22	1.6
1/17/2013	13:17:00	14.753	14.346	0.407	0.939	2.16	-0.759	9.11	1.6
1/17/2013	13:32:00	14.756	14.366	0.390	0.900	2.16	-0.720	8.64	1.6
1/17/2013	13:47:00	14.739	14.366	0.373	0.861	2.16	-0.681	8.17	1.6
1/17/2013	14:02:00	14.716	14.364	0.352	0.812	2.16	-0.632	7.58	1.6
1/17/2013	14:17:00	14.714	14.329	0.385	0.888	2.16	-0.708	8.50	1.6
1/17/2013	14:32:00	14.703	14.331	0.372	0.858	2.16	-0.678	8.14	1.6
1/17/2013	14:47:00	14.697	14.326	0.371	0.856	2.16	-0.676	8.11	1.6
1/17/2013	15:02:00	14.694	14.333	0.361	0.833	2.16	-0.653	7.83	1.6
1/17/2013	15:17:00	14.689	14.326	0.363	0.837	2.16	-0.657	7.89	1.6
1/17/2013	15:32:00	14.681	14.335	0.346	0.798	2.16	-0.618	7.42	1.6
1/17/2013	15:47:00	14.674	14.330	0.344	0.794	2.16	-0.614	7.36	1.6
1/17/2013	16:02:00	14.670	14.372	0.298	0.687	2.16	-0.507	6.09	1.6
1/17/2013	16:17:00	14.670	14.378	0.292	0.674	2.16	-0.494	5.92	1.6
1/17/2013	16:32:00	14.670	14.381	0.289	0.667	2.16	-0.487	5.84	1.6
1/17/2013	16:47:00	14.679	14.400	0.279	0.644	2.16	-0.464	5.56	1.6
1/17/2013	17:02:00	14.702	14.369	0.333	0.768	2.16	-0.588	7.06	1.6
1/17/2013	17:17:00	14.824	14.364	0.460	1.061	2.16	-0.881	10.57	1.6
1/17/2013	17:32:00	15.117	14.363	0.754	1.739	2.16	-1.559	18.71	1.6
1/17/2013	17:47:00	15.348	14.360	0.988	2.279	2.16	-2.099	25.19	1.6
1/17/2013	18:02:00	15.342	14.375	0.967	2.231	2.16	-2.051	24.61	1.6
1/17/2013	18:17:00	15.266	14.391	0.875	2.019	2.16	-1.839	22.06	1.6
1/17/2013	18:32:00	15.220	14.396	0.824	1.901	2.16	-1.721	20.65	1.6
1/17/2013	18:47:00	15.183	14.406	0.777	1.793	2.16	-1.613	19.35	1.6
1/17/2013	19:02:00	15.167	14.416	0.751	1.733	2.16	-1.553	18.63	1.6
1/17/2013	19:17:00	15.154	14.431	0.723	1.668	2.16	-1.488	17.86	1.6
1/17/2013	19:32:00	15.134	14.440	0.694	1.601	2.16	-1.421	17.05	1.6
1/17/2013	19:47:00	15.112	14.457	0.655	1.511	2.16	-1.331	15.97	1.6
1/17/2013	20:02:00	15.097	14.471	0.626	1.444	2.16	-1.264	15.17	1.6
1/17/2013	20:17:00	15.084	14.472	0.612	1.412	2.16	-1.232	14.78	1.6
1/17/2013	20:32:00	15.084	14.485	0.599	1.382	2.16	-1.202	14.42	1.6
1/17/2013	20:47:00	15.080	14.495	0.585	1.350	2.16	-1.170	14.04	1.6
1/17/2013	21:02:00	15.098	14.502	0.596	1.375	2.16	-1.195	14.34	1.6
1/17/2013	21:17:00	15.107	14.515	0.592	1.366	2.16	-1.186	14.23	1.6
1/17/2013	21:32:00	15.120	14.530	0.590	1.361	2.16	-1.181	14.17	1.6
1/17/2013	21:47:00	15.152	14.537	0.615	1.419	2.16	-1.239	14.87	1.6
1/17/2013	22:02:00	15.179	14.532	0.647	1.493	2.16	-1.313	15.75	1.6
1/17/2013	22:17:00	15.212	14.529	0.683	1.576	2.16	-1.396	16.75	1.6
1/17/2013	22:32:00	15.242	14.522	0.720	1.661	2.16	-1.481	17.77	1.6
1/17/2013	22:47:00	15.261	14.527	0.734	1.693	2.16	-1.513	18.16	1.6
1/17/2013	23:02:00	15.279	14.529	0.750	1.730	2.16	-1.550	18.60	1.6
1/17/2013	23:17:00	15.282	14.547	0.735	1.696	2.16	-1.516	18.19	1.6
1/17/2013	23:32:00	15.271	14.553	0.718	1.656	2.16	-1.476	17.72	1.6
1/17/2013	23:47:00	15.266	14.551	0.715	1.650	2.16	-1.470	17.63	1.6
1/18/2013	0:02:00	15.241	14.567	0.674	1.555	2.16	-1.375	16.50	1.6
1/18/2013	0:17:00	15.236	14.570	0.666	1.536	2.16	-1.356	16.28	1.6
1/18/2013	0:32:00	15.223	14.554	0.669	1.543	2.16	-1.363	16.36	1.6
1/18/2013	0:47:00	15.206	14.570	0.636	1.467	2.16	-1.287	15.45	1.6
1/18/2013	1:02:00	15.199	14.561	0.638	1.472	2.16	-1.292	15.50	1.6
1/18/2013	1:17:00	15.198	14.570	0.628	1.449	2.16	-1.269	15.23	1.6
1/18/2013	1:32:00	15.182	14.581	0.601	1.387	2.16	-1.207	14.48	1.6
1/18/2013	1:47:00	15.174	14.588	0.586	1.352	2.16	-1.172	14.06	1.6
1/18/2013	2:02:00	15.166	14.578	0.588	1.357	2.16	-1.177	14.12	1.6
1/18/2013	2:17:00	15.166	14.587	0.579	1.336	2.16	-1.156	13.87	1.6
1/18/2013	2:32:00	15.160	14.581	0.579	1.336	2.16	-1.156	13.87	1.6
1/18/2013	2:47:00	15.158	14.581	0.577	1.331	2.16	-1.151	13.81	1.6
1/18/2013	3:02:00	15.150	14.600	0.550	1.269	2.16	-1.089	13.07	1.6
1/18/2013	3:17:00	15.157	14.608	0.549	1.267	2.16	-1.087	13.04	1.6
1/18/2013	3:32:00	15.156	14.599	0.557	1.285	2.16	-1.105	13.26	1.6
1/18/2013	3:47:00	15.145	14.609	0.536	1.237	2.16	-1.057	12.68	1.6
1/18/2013	4:02:00	15.140	14.601	0.539	1.243	2.16	-1.063	12.76	1.6
1/18/2013	4:17:00	15.127	14.594	0.533	1.230	2.16	-1.050	12.60	1.6
1/18/2013	4:32:00	15.122	14.600	0.522	1.204	2.16	-1.024	12.29	1.6
1/18/2013	4:47:00	15.117	14.599	0.518	1.195	2.16	-1.015	12.18	1.6
1/18/2013	5:02:00	15.112	14.609	0.503	1.160	2.16	-0.980	11.77	1.6
1/18/2013	5:17:00	15.110	14.620	0.490	1.130	2.16	-0.950	11.41	1.6
1/18/2013	5:32:00	15.099	14.611	0.488	1.126	2.16	-0.946	11.35	1.6
1/18/2013	5:47:00	15.105	14.630	0.475	1.096	2.16	-0.916	10.99	1.6
1/18/2013	6:02:00	15.097	14.624	0.473	1.091	2.16	-0.911	10.93	1.6
1/18/2013	6:17:00	15.088	14.620	0.468	1.080	2.16	-0.900	10.80	1.6
1/18/2013	6:32:00	15.095	14.643	0.452	1.043	2.16	-0.863	10.35	1.6
1/18/2013	6:47:00	15.094	14.647	0.447	1.031	2.16	-0.851	10.21	1.6
1/18/2013	7:02:00	15.095	14.651	0.444	1.024	2.16	-0.844	10.13	1.6
1/18/2013	7:17:00	15.091	14.654	0.437	1.008	2.16	-0.828	9.94	1.6
1/18/2013	7:32:00	15.084	14.659	0.425	0.980	2.16	-0.800	9.61	1.6

1/18/2013	7:47:00	15.094	14.664	0.430	0.992	2.16	-0.812	9.74	1.6	
1/18/2013	8:02:00	15.084	14.676	0.408	0.941	2.16	-0.761	9.14	1.6	
1/18/2013	8:17:00	15.095	14.677	0.418	0.964	2.16	-0.784	9.41	1.6	
1/18/2013	8:32:00	15.089	14.685	0.404	0.932	2.16	-0.752	9.02	1.6	
1/18/2013	8:47:00	15.092	14.681	0.411	0.948	2.16	-0.768	9.22	1.6	
1/18/2013	9:02:00	15.091	14.693	0.398	0.918	2.16	-0.738	8.86	1.6	
1/18/2013	9:17:00	15.099	14.694	0.405	0.934	2.16	-0.754	9.05	1.6	
1/18/2013	9:32:00	15.097	14.697	0.400	0.923	2.16	-0.743	8.91	1.6	
1/18/2013	9:47:00	15.101	14.690	0.411	0.948	2.16	-0.768	9.22	1.6	
1/18/2013	10:02:00	15.101	14.696	0.405	0.934	2.16	-0.754	9.05	1.6	
1/18/2013	10:17:00	15.099	14.694	0.405	0.934	2.16	-0.754	9.05	1.6	
1/18/2013	10:32:00	15.098	14.695	0.403	0.930	2.16	-0.750	9.00	1.6	
1/18/2013	10:47:00	15.101	14.692	0.409	0.944	2.16	-0.764	9.16	1.6	
1/18/2013	11:02:00	15.096	14.683	0.413	0.953	2.16	-0.773	9.27	1.6	
1/18/2013	11:17:00	15.093	14.687	0.406	0.937	2.16	-0.757	9.08	1.6	
1/18/2013	11:32:00	15.090	14.682	0.408	0.941	2.16	-0.761	9.14	1.6	
1/18/2013	11:47:00	15.087	14.678	0.409	0.944	2.16	-0.764	9.16	1.6	
1/18/2013	12:02:00	15.079	14.676	0.403	0.930	2.16	-0.750	9.00	1.6	
1/18/2013	12:17:00	15.075	14.681	0.394	0.909	2.16	-0.729	8.75	1.6	
1/18/2013	12:32:00	15.071	14.679	0.392	0.904	2.16	-0.724	8.69	1.6	
1/18/2013	12:47:00	15.061	14.677	0.384	0.886	2.16	-0.706	8.47	1.6	
1/18/2013	13:02:00	15.063	14.678	0.385	0.888	2.16	-0.708	8.50	1.6	
1/18/2013	13:17:00	15.060	14.676	0.384	0.886	2.16	-0.706	8.47	1.6	
1/18/2013	13:32:00	15.053	14.679	0.374	0.863	2.16	-0.683	8.19	1.6	
1/18/2013	13:47:00	15.050	14.676	0.374	0.863	2.16	-0.683	8.19	1.6	
1/18/2013	14:02:00	15.051	14.680	0.371	0.856	2.16	-0.676	8.11	1.6	
1/18/2013	14:17:00	15.053	14.681	0.372	0.858	2.16	-0.678	8.14	1.6	
1/18/2013	14:32:00	15.049	14.682	0.367	0.847	2.16	-0.667	8.00	1.6	
1/18/2013	14:47:00	15.046	14.683	0.363	0.837	2.16	-0.657	7.89	1.6	
1/18/2013	15:02:00	15.044	14.685	0.359	0.828	2.16	-0.648	7.78	1.6	
1/18/2013	15:17:00	15.042	14.686	0.356	0.821	2.16	-0.641	7.70	1.6	
1/18/2013	15:32:00	15.043	14.687	0.356	0.821	2.16	-0.641	7.70	1.6	
1/18/2013	15:47:00	15.042	14.690	0.352	0.812	2.16	-0.632	7.58	1.6	
1/18/2013	16:02:00	15.043	14.693	0.350	0.807	2.16	-0.627	7.53	1.6	
1/18/2013	16:17:00	15.044	14.688	0.356	0.821	2.16	-0.641	7.70	1.6	
1/18/2013	16:32:00	15.043	14.688	0.355	0.819	2.16	-0.639	7.67	1.6	
1/18/2013	16:47:00	15.041	14.694	0.347	0.801	2.16	-0.621	7.45	1.6	
1/18/2013	17:02:00	15.039	14.692	0.347	0.801	2.16	-0.621	7.45	1.6	
1/18/2013	17:17:00	15.039	14.698	0.341	0.787	2.16	-0.607	7.28	1.6	
1/18/2013	17:32:00	15.039	14.706	0.333	0.768	2.16	-0.588	7.06	1.6	
1/18/2013	17:47:00	15.039	14.700	0.339	0.782	2.16	-0.602	7.22	1.6	
1/18/2013	18:02:00	15.040	14.718	0.322	0.743	2.16	-0.563	6.75	1.6	
1/18/2013	18:17:00	15.040	14.694	0.346	0.798	2.16	-0.618	7.42	1.6	
1/18/2013	18:32:00	15.042	14.701	0.341	0.787	2.16	-0.607	7.28	1.6	
1/18/2013	18:47:00	15.043	14.698	0.345	0.796	2.16	-0.616	7.39	1.6	
1/18/2013	19:02:00	15.049	14.714	0.335	0.773	2.16	-0.593	7.11	1.6	
1/18/2013	19:17:00	15.050	14.715	0.335	0.773	2.16	-0.593	7.11	1.6	
1/18/2013	19:32:00	15.047	14.702	0.345	0.796	2.16	-0.616	7.39	1.6	
1/18/2013	19:47:00	15.046	14.712	0.334	0.771	2.16	-0.591	7.09	1.6	
1/18/2013	20:02:00	15.046	14.710	0.336	0.775	2.16	-0.595	7.14	1.6	
1/18/2013	20:17:00	15.044	14.713	0.331	0.764	2.16	-0.584	7.00	1.6	
1/18/2013	20:32:00	15.042	14.711	0.331	0.764	2.16	-0.584	7.00	1.6	
1/18/2013	20:47:00	15.044	14.712	0.332	0.766	2.16	-0.586	7.03	1.6	
1/18/2013	21:02:00	15.041	14.706	0.335	0.773	2.16	-0.593	7.11	1.6	
1/18/2013	21:17:00	15.040	14.706	0.334	0.771	2.16	-0.591	7.09	1.6	
1/18/2013	21:32:00	15.038	14.708	0.330	0.761	2.16	-0.581	6.98	1.6	
1/18/2013	21:47:00	15.037	14.703	0.334	0.771	2.16	-0.591	7.09	1.6	
1/18/2013	22:02:00	15.035	14.698	0.337	0.777	2.16	-0.597	7.17	1.6	
1/18/2013	22:17:00	15.038	14.703	0.335	0.773	2.16	-0.593	7.11	1.6	
1/18/2013	22:32:00	15.040	14.700	0.340	0.784	2.16	-0.604	7.25	1.6	
1/18/2013	22:47:00	15.036	14.694	0.342	0.789	2.16	-0.609	7.31	1.6	
1/18/2013	23:02:00	15.027	14.700	0.327	0.754	2.16	-0.574	6.89	1E-06	
1/18/2013	23:17:00	15.025	14.694	0.331	0.764	2.16	-0.584	7.00		
1/18/2013	23:32:00	15.025	14.704	0.321	0.741	2.16	-0.561	6.73		
1/18/2013	23:47:00	15.024	14.689	0.335	0.773	2.16	-0.593	7.11		
1/19/2013	0:02:00	15.019	14.702	0.317	0.731	2.16	-0.551	6.62		
1/19/2013	0:17:00	15.020	14.693	0.327	0.754	2.16	-0.574	6.89		
1/19/2013	0:32:00	15.017	14.702	0.315	0.727	2.16	-0.547	6.56		
1/19/2013	0:47:00	15.018	14.702	0.316	0.729	2.16	-0.549	6.59		
1/19/2013	1:02:00	15.021	14.692	0.329	0.759	2.16	-0.579	6.95		
1/19/2013	1:17:00	15.018	14.700	0.318	0.734	2.16	-0.554	6.64		
1/19/2013	1:32:00	15.017	14.691	0.326	0.752	2.16	-0.572	6.86		
1/19/2013	1:47:00	15.014	14.688	0.326	0.752	2.16	-0.572	6.86		
1/19/2013	2:02:00	15.012	14.693	0.319	0.736	2.16	-0.556	6.67		
1/19/2013	2:17:00	15.009	14.692	0.317	0.731	2.16	-0.551	6.62		
1/19/2013	2:32:00	15.009	14.688	0.321	0.741	2.16	-0.561	6.73		
1/19/2013	2:47:00	15.009	14.694	0.315	0.727	2.16	-0.547	6.56		
1/19/2013	3:02:00	15.004	14.684	0.320	0.738	2.16	-0.558	6.70		
1/19/2013	3:17:00	15.001	14.682	0.319	0.736	2.16	-0.556	6.67		
1/19/2013	3:32:00	14.996	14.690	0.306	0.706	2.16	-0.526	6.31		
1/19/2013	3:47:00	14.994	14.681	0.313	0.722	2.16	-0.542	6.51		
1/19/2013	4:02:00	14.991	14.686	0.305	0.704	2.16	-0.524	6.28		
1/19/2013	4:17:00	14.987	14.684	0.303	0.699	2.16	-0.519	6.23		
1/19/2013	4:32:00	14.983	14.685	0.298	0.687	2.16	-0.507	6.09		
1/19/2013	4:47:00	14.979	14.687	0.292	0.674	2.16	-0.494	5.92		
1/19/2013	5:02:00	14.978	14.686	0.292	0.674	2.16	-0.494	5.92		
1/19/2013	5:17:00	14.975	14.689	0.286	0.660	2.16	-0.480	5.76		
1/19/2013	5:32:00	14.975	14.694	0.281	0.648	2.16	-0.468	5.62		
1/19/2013	5:47:00	14.968	14.677	0.291	0.671	2.16	-0.491	5.90		
1/19/2013	6:02:00	14.966	14.674	0.292	0.674	2.16	-0.494	5.92		
1/19/2013	6:17:00	14.962	14.679	0.283	0.653	2.16	-0.473	5.67		
1/19/2013	6:32:00	14.959	14.689	0.270	0.623	2.16	-0.443	5.31		
1/19/2013	6:47:00	14.956	14.681	0.275	0.634	2.16	-0.454	5.45		
1/19/2013	7:02:00	14.954	14.686	0.268	0.618	2.16	-0.438	5.26		
1/19/2013	7:17:00	14.950	14.686	0.264	0.609	2.16	-0.429	5.15		
1/19/2013	7:32:00	14.952	14.684	0.268	0.618	2.16	-0.438	5.26		
1/19/2013	7:47:00	14.946	14.688	0.258	0.595	2.16	-0.415	4.98		
1/19/2013	8:02:00	14.950	14.687	0.263	0.607	2.16	-0.427	5.12		
1/19/2013	8:17:00	14.951	14.689	0.262	0.604	2.16	-0.424	5.09		
1/19/2013	8:32:00	14.949	14.688	0.261	0.602	2.16	-0.422	5.07		
1/19/2013	8:47:00	14.951	14.686	0.265	0.611	2.16	-0.431	5.18		
1/19/2013	9:02:00	14.950	14.682	0.268	0.618	2.16	-0.438	5.26		
1/19/2013	9:17:00	14.952	14.683	0.269	0.621	2.16	-0.441	5.29		
1/19/2013	9:32:00	14.949	14.687	0.262	0.604	2.16	-0.424	5.09		
1/19/2013	9:47:00	14.946	14.679	0.267	0.616	2.16	-0.436	5.23		
1/19/2013	10:02:00	14.946	14.670	0.276	0.637	2.16	-0.457	5.48		
1/19/2013	10:17:00	14.942	14.668	0.274	0.632	2.16	-0.452	5.43		
1/19/2013	10:32:00	14.942	14.663	0.279	0.644	2.16	-0.464	5.56		
1/19/2013	10:47:00	14.941	14.656	0.285	0.657	2.16	-0.477	5.73		
1/19/2013	11:02:00	14.937	14.645	0.292	0.674	2.16	-0.494	5.92		
1/19/2013	11:17:00	14.927	14.634	0.293	0.676	2.16	-0.496	5.95		
1/19/2013	11:32:00	14.923	14.628	0.295	0.681	2.16	-0.501	6.01		
1/19/2013	11:47:00	14.921	14.627	0.294	0.678	2.16	-0.498	5.98		
1/19/2013	12:02:00	14.911	14.616	0.295	0.681	2.16	-0.501	6.01		
1/19/2013	12:17:00	14.897	14.618	0.279	0.644	2.16	-0.464	5.56		
1/19/2013	12:32:00	14.897	14.609	0.288	0.664	2.16	-0.484	5.81		
1/19/2013	12:47:00	14.885	14.601	0.284	0.655	2.16	-0.475	5.70		
1/19/2013	13:02:00	14.888	14.601	0.287	0.662	2.16	-0.482	5.79		
1/19/2013	13:17:00	14.865	14.597	0.268	0.618	2.16	-0.438	5.26		
1/19/2013	13:32:00	14.886	14.595	0.291	0.671	2.16	-0.491	5.90		
1/19/2013	13:47:00	14.878	14.588	0.290	0.669	2.16	-0.489	5.87		
1/19/2013	14:02:00	14.873	14.584	0.289	0.667	2.16	-0.487	5.84		
1/19/2013	14:17:00	14.864	14.586	0.278	0.641	2.16	-0.461	5.54		
1/19/2013	14:32:00	14.843	14.582	0.261	0.602	2.16	-0.422	5.07		
1/19/2013	14:47:00	14.846	14.583	0.263	0.607	2.16	-0.427	5.12		
1/19/2013	15:02:00	14.853	14.583	0.270	0.623	2.16	-0.443	5.31		
1/19/2013	15:17:00	14.828	14.575	0.253	0.584	2.16	-0.404	4.84		
1/19/2013	15:32:00	14.847	14.577	0.270	0.623	2.16	-0.443	5.31		
1/19/2013	15:47:00	14.835	14.570	0.265	0.611	2.16	-0.431	5.18		
1/19/2013	16:02:00	14.837	14.570	0.267	0.616	2.16	-0.436	5.23		
1/19/2013	16:17:00	14.837	14.572	0.265	0.611	2.16	-0.431	5.18		
1/19/2013	16:32:00	14.828	14.568	0.260	0.600	2.16	-0.420	5.04		
1/19/2013	16:47:00	14.824	14.567	0.257	0.593	2.16	-0.413	4.95		

1/19/2013	17:02:00	14.826	14.570	0.256	0.591	2.16	-0.411	4.93
1/19/2013	17:17:00	14.828	14.560	0.268	0.618	2.16	-0.438	5.26
1/19/2013	17:32:00	14.825	14.565	0.260	0.600	2.16	-0.420	5.04
1/19/2013	17:47:00	14.820	14.573	0.247	0.570	2.16	-0.390	4.68
1/19/2013	18:02:00	14.818	14.572	0.246	0.568	2.16	-0.388	4.65
1/19/2013	18:17:00	14.819	14.571	0.248	0.572	2.16	-0.392	4.71
1/19/2013	18:32:00	14.823	14.563	0.260	0.600	2.16	-0.420	5.04
1/19/2013	18:47:00	14.821	14.566	0.255	0.588	2.16	-0.408	4.90
1/19/2013	19:02:00	14.825	14.577	0.248	0.572	2.16	-0.392	4.71
1/19/2013	19:17:00	14.824	14.575	0.249	0.574	2.16	-0.394	4.73
1/19/2013	19:32:00	14.821	14.574	0.247	0.570	2.16	-0.390	4.68
1/19/2013	19:47:00	14.823	14.573	0.250	0.577	2.16	-0.397	4.76
1/19/2013	20:02:00	14.824	14.566	0.258	0.595	2.16	-0.415	4.98
1/19/2013	20:17:00	14.821	14.569	0.252	0.581	2.16	-0.401	4.82
1/19/2013	20:32:00	14.822	14.568	0.254	0.586	2.16	-0.406	4.87
1/19/2013	20:47:00	14.819	14.562	0.257	0.593	2.16	-0.413	4.95
1/19/2013	21:02:00	14.814	14.554	0.260	0.600	2.16	-0.420	5.04
1/19/2013	21:17:00	14.812	14.564	0.248	0.572	2.16	-0.392	4.71
1/19/2013	21:32:00	14.807	14.558	0.249	0.574	2.16	-0.394	4.73
1/19/2013	21:47:00	14.809	14.558	0.251	0.579	2.16	-0.399	4.79
1/19/2013	22:02:00	14.804	14.560	0.244	0.563	2.16	-0.383	4.59
1/19/2013	22:17:00	14.802	14.539	0.263	0.607	2.16	-0.427	5.12
1/19/2013	22:32:00	14.798	14.541	0.257	0.593	2.16	-0.413	4.95
1/19/2013	22:47:00	14.792	14.539	0.253	0.584	2.16	-0.404	4.84
1/19/2013	23:02:00	14.787	14.546	0.241	0.556	2.16	-0.376	4.51
1/19/2013	23:17:00	14.782	14.542	0.240	0.554	2.16	-0.374	4.48
1/19/2013	23:32:00	14.786	14.531	0.255	0.588	2.16	-0.408	4.90
1/19/2013	23:47:00	14.782	14.537	0.245	0.565	2.16	-0.385	4.62
1/20/2013	0:02:00	14.780	14.540	0.240	0.554	2.16	-0.374	4.48
1/20/2013	0:17:00	14.774	14.532	0.242	0.558	2.16	-0.378	4.54
1/20/2013	0:32:00	14.767	14.531	0.236	0.544	2.16	-0.364	4.37
1/20/2013	0:47:00	14.763	14.531	0.232	0.535	2.16	-0.355	4.26
1/20/2013	1:02:00	14.762	14.531	0.231	0.533	2.16	-0.353	4.24
1/20/2013	1:17:00	14.759	14.534	0.225	0.519	2.16	-0.339	4.07
1/20/2013	1:32:00	14.757	14.522	0.235	0.542	2.16	-0.362	4.35
1/20/2013	1:47:00	14.756	14.506	0.250	0.577	2.16	-0.397	4.76
1/20/2013	2:02:00	14.750	14.511	0.239	0.551	2.16	-0.371	4.46
1/20/2013	2:17:00	14.754	14.506	0.248	0.572	2.16	-0.392	4.71
1/20/2013	2:32:00	14.749	14.532	0.217	0.501	2.16	-0.321	3.85
1/20/2013	2:47:00	14.747	14.511	0.236	0.544	2.16	-0.364	4.37
1/20/2013	3:02:00	14.743	14.508	0.235	0.542	2.16	-0.362	4.35
1/20/2013	3:17:00	14.738	14.511	0.227	0.524	2.16	-0.344	4.12
1/20/2013	3:32:00	14.742	14.508	0.234	0.540	2.16	-0.360	4.32
1/20/2013	3:47:00	14.745	14.507	0.238	0.549	2.16	-0.369	4.43
1/20/2013	4:02:00	14.740	14.500	0.240	0.554	2.16	-0.374	4.48
1/20/2013	4:17:00	14.741	14.507	0.234	0.540	2.16	-0.360	4.32
1/20/2013	4:32:00	14.741	14.507	0.234	0.540	2.16	-0.360	4.32
1/20/2013	4:47:00	14.736	14.500	0.236	0.544	2.16	-0.364	4.37
1/20/2013	5:02:00	14.733	14.514	0.219	0.505	2.16	-0.325	3.90
1/20/2013	5:17:00	14.734	14.495	0.239	0.551	2.16	-0.371	4.46
1/20/2013	5:32:00	14.731	14.501	0.230	0.531	2.16	-0.351	4.21
1/20/2013	5:47:00	14.730	14.508	0.222	0.512	2.16	-0.332	3.99
1/20/2013	6:02:00	14.729	14.499	0.230	0.531	2.16	-0.351	4.21
1/20/2013	6:17:00	14.730	14.512	0.218	0.503	2.16	-0.323	3.88
1/20/2013	6:32:00	14.725	14.513	0.212	0.489	2.16	-0.309	3.71
1/20/2013	6:47:00	14.728	14.524	0.204	0.471	2.16	-0.291	3.49
1/20/2013	7:02:00	14.729	14.512	0.217	0.501	2.16	-0.321	3.85
1/20/2013	7:17:00	14.732	14.514	0.218	0.503	2.16	-0.323	3.88
1/20/2013	7:32:00	14.730	14.512	0.218	0.503	2.16	-0.323	3.88
1/20/2013	7:47:00	14.733	14.514	0.219	0.505	2.16	-0.325	3.90
1/20/2013	8:02:00	14.736	14.510	0.226	0.521	2.16	-0.341	4.10
1/20/2013	8:17:00	14.740	14.515	0.225	0.519	2.16	-0.339	4.07
1/20/2013	8:32:00	14.738	14.524	0.214	0.494	2.16	-0.314	3.76
1/20/2013	8:47:00	14.734	14.520	0.214	0.494	2.16	-0.314	3.76
1/20/2013	9:02:00	14.737	14.518	0.219	0.505	2.16	-0.325	3.90
1/20/2013	9:17:00	14.738	14.521	0.217	0.501	2.16	-0.321	3.85
1/20/2013	9:32:00	14.743	14.517	0.226	0.521	2.16	-0.341	4.10
1/20/2013	9:47:00	14.744	14.513	0.231	0.533	2.16	-0.353	4.24
1/20/2013	10:02:00	14.742	14.515	0.227	0.524	2.16	-0.344	4.12
1/20/2013	10:17:00	14.738	14.507	0.231	0.533	2.16	-0.353	4.24
1/20/2013	10:32:00	14.737	14.502	0.235	0.542	2.16	-0.362	4.35
1/20/2013	10:47:00	14.737	14.499	0.238	0.549	2.16	-0.369	4.43
1/20/2013	11:02:00	14.733	14.496	0.237	0.547	2.16	-0.367	4.40
1/20/2013	11:17:00	14.732	14.491	0.241	0.556	2.16	-0.376	4.51
1/20/2013	11:32:00	14.731	14.487	0.244	0.563	2.16	-0.383	4.59
1/20/2013	11:47:00	14.726	14.486	0.240	0.554	2.16	-0.374	4.48
1/20/2013	12:02:00	14.719	14.481	0.238	0.549	2.16	-0.369	4.43
1/20/2013	12:17:00	14.721	14.480	0.241	0.556	2.16	-0.376	4.51
1/20/2013	12:32:00	14.712	14.475	0.237	0.547	2.16	-0.367	4.40
1/20/2013	12:47:00	14.707	14.468	0.239	0.551	2.16	-0.371	4.46
1/20/2013	13:02:00	14.718	14.465	0.253	0.584	2.16	-0.404	4.84
1/20/2013	13:17:00	14.702	14.467	0.235	0.542	2.16	-0.362	4.35
1/20/2013	13:32:00	14.697	14.464	0.233	0.538	2.16	-0.358	4.29
1/20/2013	13:47:00	14.694	14.462	0.232	0.535	2.16	-0.355	4.26
1/20/2013	14:02:00	14.684	14.459	0.225	0.519	2.16	-0.339	4.07
1/20/2013	14:17:00	14.687	14.460	0.227	0.524	2.16	-0.344	4.12
1/20/2013	14:32:00	14.686	14.461	0.225	0.519	2.16	-0.339	4.07
1/20/2013	14:47:00	14.687	14.467	0.220	0.508	2.16	-0.328	3.93
1/20/2013	15:02:00	14.686	14.466	0.220	0.508	2.16	-0.328	3.93
1/20/2013	15:17:00	14.681	14.460	0.221	0.510	2.16	-0.330	3.96
1/20/2013	15:32:00	14.682	14.464	0.218	0.503	2.16	-0.323	3.88
1/20/2013	15:47:00	14.677	14.466	0.211	0.487	2.16	-0.307	3.68
1/20/2013	16:02:00	14.679	14.465	0.214	0.494	2.16	-0.314	3.76
1/20/2013	16:17:00	14.686	14.465	0.221	0.510	2.16	-0.330	3.96
1/20/2013	16:32:00	14.685	14.467	0.218	0.503	2.16	-0.323	3.88
1/20/2013	16:47:00	14.675	14.474	0.201	0.464	2.16	-0.284	3.40
1/20/2013	17:02:00	14.687	14.475	0.212	0.489	2.16	-0.309	3.71
1/20/2013	17:17:00	14.690	14.476	0.214	0.494	2.16	-0.314	3.76
1/20/2013	17:32:00	14.686	14.480	0.206	0.475	2.16	-0.295	3.54
1/20/2013	17:47:00	14.696	14.480	0.216	0.498	2.16	-0.318	3.82
1/20/2013	18:02:00	14.689	14.484	0.205	0.473	2.16	-0.293	3.52
1/20/2013	18:17:00	14.693	14.485	0.208	0.480	2.16	-0.300	3.60
1/20/2013	18:32:00	14.690	14.485	0.205	0.473	2.16	-0.293	3.52
1/20/2013	18:47:00	14.693	14.485	0.208	0.480	2.16	-0.300	3.60
1/20/2013	19:02:00	14.693	14.484	0.209	0.482	2.16	-0.302	3.63
1/20/2013	19:17:00	14.691	14.486	0.205	0.473	2.16	-0.293	3.52
1/20/2013	19:32:00	14.693	14.493	0.200	0.461	2.16	-0.281	3.38
1/20/2013	19:47:00	14.693	14.494	0.199	0.459	2.16	-0.279	3.35
1/20/2013	20:02:00	14.696	14.496	0.200	0.461	2.16	-0.281	3.38
1/20/2013	20:17:00	14.700	14.492	0.208	0.480	2.16	-0.300	3.60
1/20/2013	20:32:00	14.698	14.499	0.199	0.459	2.16	-0.279	3.35
1/20/2013	20:47:00	14.703	14.502	0.201	0.464	2.16	-0.284	3.40
1/20/2013	21:02:00	14.703	14.499	0.204	0.471	2.16	-0.291	3.49
1/20/2013	21:17:00	14.707	14.501	0.206	0.475	2.16	-0.295	3.54
1/20/2013	21:32:00	14.703	14.508	0.195	0.450	2.16	-0.270	3.24
1/20/2013	21:47:00	14.704	14.503	0.201	0.464	2.16	-0.284	3.40
1/20/2013	22:02:00	14.701	14.501	0.200	0.461	2.16	-0.281	3.38
1/20/2013	22:17:00	14.703	14.499	0.204	0.471	2.16	-0.291	3.49
1/20/2013	22:32:00	14.697	14.502	0.195	0.450	2.16	-0.270	3.24
1/20/2013	22:47:00	14.703	14.494	0.209	0.482	2.16	-0.302	3.63
1/20/2013	23:02:00	14.707	14.508	0.199	0.459	2.16	-0.279	3.35
1/20/2013	23:17:00	14.701	14.503	0.198	0.457	2.16	-0.277	3.32
1/20/2013	23:32:00	14.703	14.499	0.204	0.471	2.16	-0.291	3.49
1/20/2013	23:47:00	14.699	14.504	0.195	0.450	2.16	-0.270	3.24
1/21/2013	0:02:00	14.698	14.506	0.192	0.443	2.16	-0.263	3.16
1/21/2013	0:17:00	14.694	14.493	0.201	0.464	2.16	-0.284	3.40
1/21/2013	0:32:00	14.692	14.505	0.187	0.431	2.16	-0.251	3.02
1/21/2013	0:47:00	14.690	14.480	0.210	0.484	2.16	-0.304	3.65
1/21/2013	1:02:00	14.685	14.486	0.199	0.459	2.16	-0.279	3.35
1/21/2013	1:17:00	14.687	14.487	0.200	0.461	2.16	-0.281	3.38
1/21/2013	1:32:00	14.688	14.499	0.189	0.436	2.16	-0.256	3.07
1/21/2013	1:47:00	14.688	14.498	0.190	0.438	2.16	-0.258	3.10
1/21/2013	2:02:00	14.686	14.484	0.202	0.466	2.16	-0.286	3.43

1/21/2013	2:17:00	14.684	14.499	0.185	0.427	2.16	-0.247	2.96
1/21/2013	2:32:00	14.682	14.500	0.182	0.420	2.16	-0.240	2.88
1/21/2013	2:47:00	14.685	14.495	0.190	0.438	2.16	-0.258	3.10
1/21/2013	3:02:00	14.682	14.473	0.209	0.482	2.16	-0.302	3.63
1/21/2013	3:17:00	14.682	14.470	0.212	0.489	2.16	-0.309	3.71
1/21/2013	3:32:00	14.682	14.491	0.191	0.441	2.16	-0.261	3.13
1/21/2013	3:47:00	14.680	14.473	0.207	0.478	2.16	-0.298	3.57
1/21/2013	4:02:00	14.681	14.495	0.186	0.429	2.16	-0.249	2.99
1/21/2013	4:17:00	14.682	14.484	0.198	0.457	2.16	-0.277	3.32
1/21/2013	4:32:00	14.673	14.484	0.189	0.436	2.16	-0.256	3.07
1/21/2013	4:47:00	14.677	14.483	0.194	0.448	2.16	-0.268	3.21
1/21/2013	5:02:00	14.677	14.488	0.189	0.436	2.16	-0.256	3.07
1/21/2013	5:17:00	14.678	14.470	0.208	0.480	2.16	-0.300	3.60
1/21/2013	5:32:00	14.680	14.472	0.208	0.480	2.16	-0.300	3.60
1/21/2013	5:47:00	14.678	14.479	0.199	0.459	2.16	-0.279	3.35
1/21/2013	6:02:00	14.674	14.488	0.186	0.429	2.16	-0.249	2.99
1/21/2013	6:17:00	14.674	14.477	0.197	0.454	2.16	-0.274	3.29
1/21/2013	6:32:00	14.672	14.475	0.197	0.454	2.16	-0.274	3.29
1/21/2013	6:47:00	14.676	14.490	0.186	0.429	2.16	-0.249	2.99
1/21/2013	7:02:00	14.674	14.489	0.185	0.427	2.16	-0.247	2.96
1/21/2013	7:17:00	14.675	14.492	0.183	0.422	2.16	-0.242	2.91
1/21/2013	7:32:00	14.679	14.503	0.176	0.406	2.16	-0.226	2.71
1/21/2013	7:47:00	14.684	14.500	0.184	0.424	2.16	-0.244	2.93
1/21/2013	8:02:00	14.682	14.498	0.184	0.424	2.16	-0.244	2.93
1/21/2013	8:17:00	14.684	14.497	0.187	0.431	2.16	-0.251	3.02
1/21/2013	8:32:00	14.684	14.491	0.193	0.445	2.16	-0.265	3.18
1/21/2013	8:47:00	14.693	14.491	0.202	0.466	2.16	-0.286	3.43
1/21/2013	9:02:00	14.695	14.490	0.205	0.473	2.16	-0.293	3.52
1/21/2013	9:17:00	14.698	14.489	0.209	0.482	2.16	-0.302	3.63
1/21/2013	9:32:00	14.695	14.486	0.209	0.482	2.16	-0.302	3.63
1/21/2013	9:47:00	14.687	14.484	0.203	0.468	2.16	-0.288	3.46
1/21/2013	10:02:00	14.689	14.482	0.207	0.478	2.16	-0.298	3.57
1/21/2013	10:17:00	14.683	14.477	0.206	0.475	2.16	-0.295	3.54
1/21/2013	10:32:00	14.688	14.467	0.221	0.510	2.16	-0.330	3.96
1/21/2013	10:47:00	14.682	14.464	0.218	0.503	2.16	-0.323	3.88
1/21/2013	11:02:00	14.676	14.459	0.217	0.501	2.16	-0.321	3.85
1/21/2013	11:17:00	14.674	14.451	0.223	0.514	2.16	-0.334	4.01
1/21/2013	11:32:00	14.670	14.446	0.224	0.517	2.16	-0.337	4.04
1/21/2013	11:47:00	14.665	14.442	0.223	0.514	2.16	-0.334	4.01
1/21/2013	12:02:00	14.654	14.444	0.210	0.484	2.16	-0.304	3.65
1/21/2013	12:17:00	14.652	14.440	0.212	0.489	2.16	-0.309	3.71
1/21/2013	12:32:00	14.644	14.437	0.207	0.478	2.16	-0.298	3.57
1/21/2013	12:47:00	14.640	14.434	0.206	0.475	2.16	-0.295	3.54
1/21/2013	13:02:00	14.644	14.431	0.213	0.491	2.16	-0.311	3.74
1/21/2013	13:17:00	14.643	14.424	0.219	0.505	2.16	-0.325	3.90
1/21/2013	13:32:00	14.629	14.419	0.210	0.484	2.16	-0.304	3.65
1/21/2013	13:47:00	14.616	14.423	0.193	0.445	2.16	-0.265	3.18
1/21/2013	14:02:00	14.617	14.424	0.193	0.445	2.16	-0.265	3.18
1/21/2013	14:17:00	14.634	14.425	0.209	0.482	2.16	-0.302	3.63
1/21/2013	14:32:00	14.632	14.416	0.216	0.498	2.16	-0.318	3.82
1/21/2013	14:47:00	14.620	14.421	0.199	0.459	2.16	-0.279	3.35
1/21/2013	15:02:00	14.617	14.424	0.193	0.445	2.16	-0.265	3.18
1/21/2013	15:17:00	14.608	14.421	0.187	0.431	2.16	-0.251	3.02
1/21/2013	15:32:00	14.611	14.422	0.189	0.436	2.16	-0.256	3.07
1/21/2013	15:47:00	14.622	14.422	0.200	0.461	2.16	-0.281	3.38
1/21/2013	16:02:00	14.621	14.420	0.201	0.464	2.16	-0.284	3.40
1/21/2013	16:17:00	14.611	14.419	0.192	0.443	2.16	-0.263	3.16
1/21/2013	16:32:00	14.609	14.414	0.195	0.450	2.16	-0.270	3.24
1/21/2013	16:47:00	14.621	14.420	0.201	0.464	2.16	-0.284	3.40
1/21/2013	17:02:00	14.611	14.419	0.192	0.443	2.16	-0.263	3.16
1/21/2013	17:17:00	14.619	14.419	0.200	0.461	2.16	-0.281	3.38
1/21/2013	17:32:00	14.620	14.415	0.205	0.473	2.16	-0.293	3.52
1/21/2013	17:47:00	14.608	14.420	0.188	0.434	2.16	-0.254	3.04
1/21/2013	18:02:00	14.617	14.425	0.192	0.443	2.16	-0.263	3.16
1/21/2013	18:17:00	14.616	14.424	0.192	0.443	2.16	-0.263	3.16
1/21/2013	18:32:00	14.610	14.430	0.180	0.415	2.16	-0.235	2.82
1/21/2013	18:47:00	14.607	14.427	0.180	0.415	2.16	-0.235	2.82
1/21/2013	19:02:00	14.612	14.424	0.188	0.434	2.16	-0.254	3.04
1/21/2013	19:17:00	14.613	14.432	0.181	0.418	2.16	-0.238	2.85
1/21/2013	19:32:00	14.619	14.437	0.182	0.420	2.16	-0.240	2.88
1/21/2013	19:47:00	14.618	14.440	0.178	0.411	2.16	-0.231	2.77
1/21/2013	20:02:00	14.615	14.446	0.169	0.390	2.16	-0.210	2.52
1/21/2013	20:17:00	14.624	14.447	0.177	0.408	2.16	-0.228	2.74
1/21/2013	20:32:00	14.626	14.444	0.182	0.420	2.16	-0.240	2.88
1/21/2013	20:47:00	14.631	14.447	0.184	0.424	2.16	-0.244	2.93
1/21/2013	21:02:00	14.636	14.449	0.187	0.431	2.16	-0.251	3.02
1/21/2013	21:17:00	14.635	14.454	0.181	0.418	2.16	-0.238	2.85
1/21/2013	21:32:00	14.638	14.455	0.183	0.422	2.16	-0.242	2.91
1/21/2013	21:47:00	14.635	14.453	0.182	0.420	2.16	-0.240	2.88
1/21/2013	22:02:00	14.643	14.453	0.190	0.438	2.16	-0.258	3.10
1/21/2013	22:17:00	14.641	14.455	0.186	0.429	2.16	-0.249	2.99
1/21/2013	22:32:00	14.643	14.452	0.191	0.441	2.16	-0.261	3.13
1/21/2013	22:47:00	14.641	14.453	0.188	0.434	2.16	-0.254	3.04
1/21/2013	23:02:00	14.644	14.456	0.188	0.434	2.16	-0.254	3.04
1/21/2013	23:17:00	14.640	14.450	0.190	0.438	2.16	-0.258	3.10
1/21/2013	23:32:00	14.639	14.462	0.177	0.408	2.16	-0.228	2.74
1/21/2013	23:47:00	14.642	14.459	0.183	0.422	2.16	-0.242	2.91
1/22/2013	0:02:00	14.639	14.449	0.190	0.438	2.16	-0.258	3.10
1/22/2013	0:17:00	14.645	14.451	0.194	0.448	2.16	-0.268	3.21
1/22/2013	0:32:00	14.642	14.475	0.167	0.385	2.16	-0.205	2.46
1/22/2013	0:47:00	14.643	14.469	0.174	0.401	2.16	-0.221	2.66
1/22/2013	1:02:00	14.643	14.470	0.173	0.399	2.16	-0.219	2.63
1/22/2013	1:17:00	14.641	14.467	0.174	0.401	2.16	-0.221	2.66
1/22/2013	1:32:00	14.649	14.470	0.179	0.413	2.16	-0.233	2.80
1/22/2013	1:47:00	14.646	14.480	0.166	0.383	2.16	-0.203	2.44
1/22/2013	2:02:00	14.654	14.481	0.173	0.399	2.16	-0.219	2.63
1/22/2013	2:17:00	14.656	14.474	0.182	0.420	2.16	-0.240	2.88
1/22/2013	2:32:00	14.654	14.475	0.179	0.413	2.16	-0.233	2.80
1/22/2013	2:47:00	14.660	14.476	0.184	0.424	2.16	-0.244	2.93
1/22/2013	3:02:00	14.657	14.475	0.182	0.420	2.16	-0.240	2.88
1/22/2013	3:17:00	14.662	14.478	0.184	0.424	2.16	-0.244	2.93
1/22/2013	3:32:00	14.663	14.476	0.187	0.431	2.16	-0.251	3.02
1/22/2013	3:47:00	14.657	14.480	0.177	0.408	2.16	-0.228	2.74
1/22/2013	4:02:00	14.660	14.495	0.165	0.381	2.16	-0.201	2.41
1/22/2013	4:17:00	14.659	14.497	0.162	0.374	2.16	-0.194	2.32
1/22/2013	4:32:00	14.658	14.511	0.147	0.339	2.16	-0.159	1.91
1/22/2013	4:47:00	14.666	14.489	0.177	0.408	2.16	-0.228	2.74
1/22/2013	5:02:00	14.672	14.515	0.157	0.362	2.16	-0.182	2.19
1/22/2013	5:17:00	14.676	14.523	0.153	0.353	2.16	-0.173	2.08
1/22/2013	5:32:00	14.682	14.515	0.167	0.385	2.16	-0.205	2.46
1/22/2013	5:47:00	14.683	14.536	0.147	0.339	2.16	-0.159	1.91
1/22/2013	6:02:00	14.681	14.534	0.147	0.339	2.16	-0.159	1.91
1/22/2013	6:17:00	14.689	14.532	0.157	0.362	2.16	-0.182	2.19
1/22/2013	6:32:00	14.695	14.514	0.181	0.418	2.16	-0.238	2.85
1/22/2013	6:47:00	14.702	14.528	0.174	0.401	2.16	-0.221	2.66
1/22/2013	7:02:00	14.704	14.534	0.170	0.392	2.16	-0.212	2.55
1/22/2013	7:17:00	14.709	14.543	0.166	0.383	2.16	-0.203	2.44
1/22/2013	7:32:00	14.710	14.541	0.169	0.390	2.16	-0.210	2.52
1/22/2013	7:47:00	14.711	14.551	0.160	0.369	2.16	-0.189	2.27
1/22/2013	8:02:00	14.716	14.549	0.167	0.385	2.16	-0.205	2.46
1/22/2013	8:17:00	14.721	14.557	0.164	0.378	2.16	-0.198	2.38
1/22/2013	8:32:00	14.725	14.566	0.159	0.367	2.16	-0.187	2.24
1/22/2013	8:47:00	14.730	14.558	0.172	0.397	2.16	-0.217	2.60
1/22/2013	9:02:00	14.728	14.557	0.171	0.394	2.16	-0.214	2.57
1/22/2013	9:17:00	14.735	14.570	0.165	0.381	2.16	-0.201	2.41
1/22/2013	9:32:00	14.738	14.566	0.172	0.397	2.16	-0.217	2.60
1/22/2013	9:47:00	14.742	14.562	0.180	0.415	2.16	-0.235	2.82
1/22/2013	10:02:00	14.741	14.565	0.176	0.406	2.16	-0.226	2.71
1/22/2013	10:17:00	14.746	14.563	0.183	0.422	2.16	-0.242	2.91
1/22/2013	10:32:00	14.747	14.559	0.188	0.434	2.16	-0.254	3.04
1/22/2013	10:47:00	14.744	14.555	0.189	0.436	2.16	-0.256	3.07
1/22/2013	11:02:00	14.749	14.550	0.199	0.459	2.16	-0.279	3.35
1/22/2013	11:17:00	14.748	14.548	0.200	0.461	2.16	-0.281	3.38

1/22/2013	11:32:00	14.743	14.550	0.193	0.445	2.16	-0.265	3.18
1/22/2013	11:47:00	14.741	14.544	0.197	0.454	2.16	-0.274	3.29
1/22/2013	12:02:00	14.737	14.542	0.195	0.450	2.16	-0.270	3.24
1/22/2013	12:17:00	14.732	14.540	0.192	0.443	2.16	-0.263	3.16
1/22/2013	12:32:00	14.730	14.537	0.193	0.445	2.16	-0.265	3.18
1/22/2013	12:47:00	14.727	14.537	0.190	0.438	2.16	-0.258	3.10
1/22/2013	13:02:00	14.728	14.539	0.189	0.436	2.16	-0.256	3.07
1/22/2013	13:17:00	14.722	14.534	0.188	0.434	2.16	-0.254	3.04
1/22/2013	13:32:00	14.722	14.544	0.178	0.411	2.16	-0.231	2.77
1/22/2013	13:47:00	14.718	14.540	0.178	0.411	2.16	-0.231	2.77
1/22/2013	14:02:00	14.725	14.543	0.182	0.420	2.16	-0.240	2.88
1/22/2013	14:17:00	14.720	14.539	0.181	0.418	2.16	-0.238	2.85
1/22/2013	14:32:00	14.718	14.544	0.174	0.401	2.16	-0.221	2.66
1/22/2013	14:47:00	14.725	14.541	0.184	0.424	2.16	-0.244	2.93
1/22/2013	15:02:00	14.724	14.537	0.187	0.431	2.16	-0.251	3.02
1/22/2013	15:17:00	14.721	14.545	0.176	0.406	2.16	-0.226	2.71
1/22/2013	15:32:00	14.728	14.541	0.187	0.431	2.16	-0.251	3.02
1/22/2013	15:47:00	14.721	14.544	0.177	0.408	2.16	-0.228	2.74
1/22/2013	16:02:00	14.720	14.547	0.173	0.399	2.16	-0.219	2.63
1/22/2013	16:17:00	14.721	14.554	0.167	0.385	2.16	-0.205	2.46
1/22/2013	16:32:00	14.719	14.543	0.176	0.406	2.16	-0.226	2.71
1/22/2013	16:47:00	14.722	14.547	0.175	0.404	2.16	-0.224	2.68
1/22/2013	17:02:00	14.727	14.553	0.174	0.401	2.16	-0.221	2.66
1/22/2013	17:17:00	14.729	14.549	0.180	0.415	2.16	-0.235	2.82
1/22/2013	17:32:00	14.727	14.557	0.170	0.392	2.16	-0.212	2.55
1/22/2013	17:47:00	14.727	14.560	0.167	0.385	2.16	-0.205	2.46
1/22/2013	18:02:00	14.732	14.560	0.172	0.397	2.16	-0.217	2.60
1/22/2013	18:17:00	14.735	14.565	0.170	0.392	2.16	-0.212	2.55
1/22/2013	18:32:00	14.737	14.560	0.177	0.408	2.16	-0.228	2.74
1/22/2013	18:47:00	14.735	14.563	0.172	0.397	2.16	-0.217	2.60
1/22/2013	19:02:00	14.739	14.559	0.180	0.415	2.16	-0.235	2.82
1/22/2013	19:17:00	14.740	14.548	0.192	0.443	2.16	-0.263	3.16
1/22/2013	19:32:00	14.740	14.564	0.176	0.406	2.16	-0.226	2.71
1/22/2013	19:47:00	14.735	14.583	0.152	0.351	2.16	-0.171	2.05
1/22/2013	20:02:00	14.742	14.572	0.170	0.392	2.16	-0.212	2.55
1/22/2013	20:17:00	14.741	14.565	0.176	0.406	2.16	-0.226	2.71
1/22/2013	20:32:00	14.741	14.571	0.170	0.392	2.16	-0.212	2.55
1/22/2013	20:47:00	14.742	14.579	0.163	0.376	2.16	-0.196	2.35
1/22/2013	21:02:00	14.745	14.578	0.167	0.385	2.16	-0.205	2.46
1/22/2013	21:17:00	14.748	14.592	0.156	0.360	2.16	-0.180	2.16
1/22/2013	21:32:00	14.747	14.588	0.159	0.367	2.16	-0.187	2.24
1/22/2013	21:47:00	14.749	14.579	0.170	0.392	2.16	-0.212	2.55
1/22/2013	22:02:00	14.752	14.579	0.173	0.399	2.16	-0.219	2.63
1/22/2013	22:17:00	14.757	14.583	0.174	0.401	2.16	-0.221	2.66
1/22/2013	22:32:00	14.758	14.578	0.180	0.415	2.16	-0.235	2.82
1/22/2013	22:47:00	14.759	14.579	0.180	0.415	2.16	-0.235	2.82
1/22/2013	23:02:00	14.760	14.596	0.164	0.378	2.16	-0.198	2.38
1/22/2013	23:17:00	14.754	14.580	0.174	0.401	2.16	-0.221	2.66
1/22/2013	23:32:00	14.759	14.593	0.166	0.383	2.16	-0.203	2.44
1/22/2013	23:47:00	14.761	14.602	0.159	0.367	2.16	-0.187	2.24
1/23/2013	0:02:00	14.760	14.584	0.176	0.406	2.16	-0.226	2.71
1/23/2013	0:17:00	14.763	14.599	0.164	0.378	2.16	-0.198	2.38
1/23/2013	0:32:00	14.760	14.603	0.157	0.362	2.16	-0.182	2.19
1/23/2013	0:47:00	14.760	14.592	0.168	0.388	2.16	-0.208	2.49
1/23/2013	1:02:00	14.763	14.591	0.172	0.397	2.16	-0.217	2.60
1/23/2013	1:17:00	14.768	14.606	0.162	0.374	2.16	-0.194	2.32
1/23/2013	1:32:00	14.765	14.594	0.171	0.394	2.16	-0.214	2.57
1/23/2013	1:47:00	14.770	14.602	0.168	0.388	2.16	-0.208	2.49
1/23/2013	2:02:00	14.765	14.604	0.161	0.371	2.16	-0.191	2.30
1/23/2013	2:17:00	14.772	14.603	0.169	0.390	2.16	-0.210	2.52
1/23/2013	2:32:00	14.772	14.599	0.173	0.399	2.16	-0.219	2.63
1/23/2013	2:47:00	14.774	14.598	0.176	0.406	2.16	-0.226	2.71
1/23/2013	3:02:00	14.777	14.608	0.169	0.390	2.16	-0.210	2.52
1/23/2013	3:17:00	14.777	14.598	0.179	0.413	2.16	-0.233	2.80
1/23/2013	3:32:00	14.770	14.595	0.175	0.404	2.16	-0.224	2.68
1/23/2013	3:47:00	14.775	14.606	0.169	0.390	2.16	-0.210	2.52
1/23/2013	4:02:00	14.775	14.619	0.156	0.360	2.16	-0.180	2.16
1/23/2013	4:17:00	14.779	14.618	0.161	0.371	2.16	-0.191	2.30
1/23/2013	4:32:00	14.777	14.611	0.166	0.383	2.16	-0.203	2.44
1/23/2013	4:47:00	14.776	14.609	0.167	0.385	2.16	-0.205	2.46
1/23/2013	5:02:00	14.779	14.620	0.159	0.367	2.16	-0.187	2.24
1/23/2013	5:17:00	14.784	14.605	0.179	0.413	2.16	-0.233	2.80
1/23/2013	5:32:00	14.783	14.630	0.153	0.353	2.16	-0.173	2.08
1/23/2013	5:47:00	14.785	14.616	0.169	0.390	2.16	-0.210	2.52
1/23/2013	6:02:00	14.791	14.629	0.162	0.374	2.16	-0.194	2.32
1/23/2013	6:17:00	14.789	14.615	0.174	0.401	2.16	-0.221	2.66
1/23/2013	6:32:00	14.787	14.619	0.168	0.388	2.16	-0.208	2.49
1/23/2013	6:47:00	14.792	14.630	0.162	0.374	2.16	-0.194	2.32
1/23/2013	7:02:00	14.794	14.636	0.158	0.365	2.16	-0.185	2.21
1/23/2013	7:17:00	14.795	14.622	0.173	0.399	2.16	-0.219	2.63
1/23/2013	7:32:00	14.793	14.626	0.167	0.385	2.16	-0.205	2.46
1/23/2013	7:47:00	14.797	14.638	0.159	0.367	2.16	-0.187	2.24
1/23/2013	8:02:00	14.797	14.635	0.162	0.374	2.16	-0.194	2.32
1/23/2013	8:17:00	14.799	14.641	0.158	0.365	2.16	-0.185	2.21
1/23/2013	8:32:00	14.800	14.644	0.156	0.360	2.16	-0.180	2.16
1/23/2013	8:47:00	14.804	14.637	0.167	0.385	2.16	-0.205	2.46
1/23/2013	9:02:00	14.808	14.640	0.168	0.388	2.16	-0.208	2.49
1/23/2013	9:17:00	14.810	14.643	0.167	0.385	2.16	-0.205	2.46
1/23/2013	9:32:00	14.810	14.637	0.173	0.399	2.16	-0.219	2.63
1/23/2013	9:47:00	14.814	14.634	0.180	0.415	2.16	-0.235	2.82
1/23/2013	10:02:00	14.810	14.635	0.175	0.404	2.16	-0.224	2.68
1/23/2013	10:17:00	14.819	14.631	0.188	0.434	2.16	-0.254	3.04
1/23/2013	10:32:00	14.812	14.626	0.186	0.429	2.16	-0.249	2.99
1/23/2013	10:47:00	14.816	14.618	0.198	0.457	2.16	-0.277	3.32
1/23/2013	11:02:00	14.814	14.615	0.199	0.459	2.16	-0.279	3.35
1/23/2013	11:17:00	14.813	14.610	0.203	0.468	2.16	-0.288	3.46
1/23/2013	11:32:00	14.808	14.604	0.204	0.471	2.16	-0.291	3.49
1/23/2013	11:47:00	14.808	14.593	0.215	0.496	2.16	-0.316	3.79
1/23/2013	12:02:00	14.799	14.588	0.211	0.487	2.16	-0.307	3.68
1/23/2013	12:17:00	14.792	14.582	0.210	0.484	2.16	-0.304	3.65
1/23/2013	12:32:00	14.791	14.572	0.219	0.505	2.16	-0.325	3.90
1/23/2013	12:47:00	14.782	14.571	0.211	0.487	2.16	-0.307	3.68
1/23/2013	13:02:00	14.778	14.568	0.210	0.484	2.16	-0.304	3.65
1/23/2013	13:17:00	14.771	14.565	0.206	0.475	2.16	-0.295	3.54
1/23/2013	13:32:00	14.757	14.566	0.191	0.441	2.16	-0.261	3.13
1/23/2013	13:47:00	14.754	14.565	0.189	0.436	2.16	-0.256	3.07
1/23/2013	14:02:00	14.752	14.560	0.192	0.443	2.16	-0.263	3.16
1/23/2013	14:17:00	14.750	14.562	0.188	0.434	2.16	-0.254	3.04
1/23/2013	14:32:00	14.746	14.561	0.185	0.427	2.16	-0.247	2.96
1/23/2013	14:47:00	14.751	14.561	0.190	0.438	2.16	-0.258	3.10
1/23/2013	15:02:00	14.743	14.553	0.190	0.438	2.16	-0.258	3.10
1/23/2013	15:17:00	14.741	14.556	0.185	0.427	2.16	-0.247	2.96
1/23/2013	15:32:00	14.746	14.550	0.196	0.452	2.16	-0.272	3.27
1/23/2013	15:47:00	14.740	14.546	0.194	0.448	2.16	-0.268	3.21
1/23/2013	16:02:00	14.739	14.544	0.195	0.450	2.16	-0.270	3.24
1/23/2013	16:17:00	14.737	14.550	0.187	0.431	2.16	-0.251	3.02
1/23/2013	16:32:00	14.731	14.541	0.190	0.438	2.16	-0.258	3.10
1/23/2013	16:47:00	14.735	14.554	0.181	0.418	2.16	-0.238	2.85
1/23/2013	17:02:00	14.728	14.545	0.183	0.422	2.16	-0.242	2.91
1/23/2013	17:17:00	14.730	14.549	0.181	0.418	2.16	-0.238	2.85
1/23/2013	17:32:00	14.724	14.544	0.180	0.415	2.16	-0.235	2.82
1/23/2013	17:47:00	14.725	14.541	0.184	0.424	2.16	-0.244	2.93
1/23/2013	18:02:00	14.725	14.540	0.185	0.427	2.16	-0.247	2.96
1/23/2013	18:17:00	14.727	14.539	0.188	0.434	2.16	-0.254	3.04
1/23/2013	18:32:00	14.723	14.532	0.191	0.441	2.16	-0.261	3.13
1/23/2013	18:47:00	14.716	14.532	0.184	0.424	2.16	-0.244	2.93
1/23/2013	19:02:00	14.721	14.533	0.188	0.434	2.16	-0.254	3.04
1/23/2013	19:17:00	14.721	14.523	0.198	0.457	2.16	-0.277	3.32
1/23/2013	19:32:00	14.709	14.520	0.189	0.436	2.16	-0.256	3.07
1/23/2013	19:47:00	14.709	14.515	0.194	0.448	2.16	-0.268	3.21
1/23/2013	20:02:00	14.708	14.538	0.170	0.392	2.16	-0.212	2.55
1/23/2013	20:17:00	14.708	14.525	0.183	0.422	2.16	-0.242	2.91
1/23/2013	20:32:00	14.706	14.506	0.200	0.461	2.16	-0.281	3.38

1/23/2013	20:47:00	14.702	14.517	0.185	0.427	2.16	-0.247	2.96
1/23/2013	21:02:00	14.700	14.521	0.179	0.413	2.16	-0.233	2.80
1/23/2013	21:17:00	14.704	14.501	0.203	0.468	2.16	-0.288	3.46
1/23/2013	21:32:00	14.699	14.506	0.193	0.445	2.16	-0.265	3.18
1/23/2013	21:47:00	14.694	14.511	0.183	0.422	2.16	-0.242	2.91
1/23/2013	22:02:00	14.695	14.508	0.187	0.431	2.16	-0.251	3.02
1/23/2013	22:17:00	14.690	14.504	0.186	0.429	2.16	-0.249	2.99
1/23/2013	22:32:00	14.686	14.481	0.205	0.473	2.16	-0.293	3.52
1/23/2013	22:47:00	14.679	14.486	0.193	0.445	2.16	-0.265	3.18
1/23/2013	23:02:00	14.681	14.482	0.199	0.459	2.16	-0.279	3.35
1/23/2013	23:17:00	14.670	14.481	0.189	0.436	2.16	-0.256	3.07
1/23/2013	23:32:00	14.679	14.491	0.188	0.434	2.16	-0.254	3.04
1/23/2013	23:47:00	14.663	14.481	0.182	0.420	2.16	-0.240	2.88
1/24/2013	0:02:00	14.662	14.477	0.185	0.427	2.16	-0.247	2.96
1/24/2013	0:17:00	14.665	14.475	0.190	0.438	2.16	-0.258	3.10
1/24/2013	0:32:00	14.665	14.470	0.195	0.450	2.16	-0.270	3.24
1/24/2013	0:47:00	14.666	14.467	0.199	0.459	2.16	-0.279	3.35
1/24/2013	1:02:00	14.658	14.457	0.201	0.464	2.16	-0.284	3.40
1/24/2013	1:17:00	14.656	14.461	0.195	0.450	2.16	-0.270	3.24
1/24/2013	1:32:00	14.646	14.458	0.188	0.434	2.16	-0.254	3.04
1/24/2013	1:47:00	14.643	14.461	0.182	0.420	2.16	-0.240	2.88
1/24/2013	2:02:00	14.640	14.461	0.179	0.413	2.16	-0.233	2.80
1/24/2013	2:17:00	14.639	14.456	0.183	0.422	2.16	-0.242	2.91
1/24/2013	2:32:00	14.635	14.455	0.180	0.415	2.16	-0.235	2.82
1/24/2013	2:47:00	14.638	14.455	0.183	0.422	2.16	-0.242	2.91
1/24/2013	3:02:00	14.637	14.451	0.186	0.429	2.16	-0.249	2.99
1/24/2013	3:17:00	14.635	14.455	0.180	0.415	2.16	-0.235	2.82
1/24/2013	3:32:00	14.630	14.454	0.176	0.406	2.16	-0.226	2.71
1/24/2013	3:47:00	14.627	14.455	0.172	0.397	2.16	-0.217	2.60
1/24/2013	4:02:00	14.630	14.452	0.178	0.411	2.16	-0.231	2.77
1/24/2013	4:17:00	14.630	14.456	0.174	0.401	2.16	-0.221	2.66
1/24/2013	4:32:00	14.633	14.457	0.176	0.406	2.16	-0.226	2.71
1/24/2013	4:47:00	14.632	14.459	0.173	0.399	2.16	-0.219	2.63
1/24/2013	5:02:00	14.630	14.461	0.169	0.390	2.16	-0.210	2.52
1/24/2013	5:17:00	14.632	14.465	0.167	0.385	2.16	-0.205	2.46
1/24/2013	5:32:00	14.631	14.473	0.158	0.365	2.16	-0.185	2.21
1/24/2013	5:47:00	14.638	14.474	0.164	0.378	2.16	-0.198	2.38
1/24/2013	6:02:00	14.642	14.479	0.163	0.376	2.16	-0.196	2.35
1/24/2013	6:17:00	14.644	14.483	0.161	0.371	2.16	-0.191	2.30
1/24/2013	6:32:00	14.644	14.484	0.160	0.369	2.16	-0.189	2.27
1/24/2013	6:47:00	14.651	14.491	0.160	0.369	2.16	-0.189	2.27
1/24/2013	7:02:00	14.655	14.500	0.155	0.358	2.16	-0.178	2.13
1/24/2013	7:17:00	14.660	14.497	0.163	0.376	2.16	-0.196	2.35
1/24/2013	7:32:00	14.660	14.502	0.158	0.365	2.16	-0.185	2.21
1/24/2013	7:47:00	14.668	14.507	0.161	0.371	2.16	-0.191	2.30
1/24/2013	8:02:00	14.669	14.511	0.158	0.365	2.16	-0.185	2.21
1/24/2013	8:17:00	14.677	14.514	0.163	0.376	2.16	-0.196	2.35
1/24/2013	8:32:00	14.678	14.522	0.156	0.360	2.16	-0.180	2.16
1/24/2013	8:47:00	14.683	14.523	0.160	0.369	2.16	-0.189	2.27
1/24/2013	9:02:00	14.691	14.537	0.154	0.355	2.16	-0.175	2.10
1/24/2013	9:17:00	14.691	14.539	0.152	0.351	2.16	-0.171	2.05
1/24/2013	9:32:00	14.696	14.543	0.153	0.353	2.16	-0.173	2.08
1/24/2013	9:47:00	14.705	14.544	0.161	0.371	2.16	-0.191	2.30
1/24/2013	10:02:00	14.707	14.552	0.155	0.358	2.16	-0.178	2.13
1/24/2013	10:17:00	14.713	14.553	0.160	0.369	2.16	-0.189	2.27
1/24/2013	10:32:00	14.721	14.560	0.161	0.371	2.16	-0.191	2.30
1/24/2013	10:47:00	14.723	14.560	0.163	0.376	2.16	-0.196	2.35
1/24/2013	11:02:00	14.730	14.563	0.167	0.385	2.16	-0.205	2.46
1/24/2013	11:17:00	14.735	14.565	0.170	0.392	2.16	-0.212	2.55
1/24/2013	11:32:00	14.730	14.561	0.169	0.390	2.16	-0.210	2.52
1/24/2013	11:47:00	14.745	14.569	0.176	0.406	2.16	-0.226	2.71
1/24/2013	12:02:00	14.744	14.570	0.174	0.401	2.16	-0.221	2.66
1/24/2013	12:17:00	14.740	14.577	0.163	0.376	2.16	-0.196	2.35
1/24/2013	12:32:00	14.750	14.581	0.169	0.390	2.16	-0.210	2.52
1/24/2013	12:47:00	14.748	14.588	0.160	0.369	2.16	-0.189	2.27
1/24/2013	13:02:00	14.748	14.588	0.160	0.369	2.16	-0.189	2.27
1/24/2013	13:17:00	14.752	14.591	0.161	0.371	2.16	-0.191	2.30
1/24/2013	13:32:00	14.752	14.591	0.161	0.371	2.16	-0.191	2.30
1/24/2013	13:47:00	14.756	14.595	0.161	0.371	2.16	-0.191	2.30
1/24/2013	14:02:00	14.756	14.605	0.151	0.348	2.16	-0.168	2.02
1/24/2013	14:17:00	14.767	14.606	0.161	0.371	2.16	-0.191	2.30
1/24/2013	14:32:00	14.764	14.608	0.156	0.360	2.16	-0.180	2.16
1/24/2013	14:47:00	14.769	14.613	0.156	0.360	2.16	-0.180	2.16
1/24/2013	15:02:00	14.781	14.615	0.166	0.383	2.16	-0.203	2.44
1/24/2013	15:17:00	14.782	14.621	0.161	0.371	2.16	-0.191	2.30
1/24/2013	15:32:00	14.785	14.621	0.164	0.378	2.16	-0.198	2.38
1/24/2013	15:47:00	14.789	14.633	0.156	0.360	2.16	-0.180	2.16
1/24/2013	16:02:00	14.791	14.631	0.160	0.369	2.16	-0.189	2.27
1/24/2013	16:17:00	14.794	14.640	0.154	0.355	2.16	-0.175	2.10
1/24/2013	16:32:00	14.796	14.641	0.155	0.358	2.16	-0.178	2.13
1/24/2013	16:47:00	14.802	14.645	0.157	0.362	2.16	-0.182	2.19
1/24/2013	17:02:00	14.811	14.649	0.162	0.374	2.16	-0.194	2.32
1/24/2013	17:17:00	14.813	14.655	0.158	0.365	2.16	-0.185	2.21
1/24/2013	17:32:00	14.816	14.659	0.157	0.362	2.16	-0.182	2.19
1/24/2013	17:47:00	14.816	14.661	0.155	0.358	2.16	-0.178	2.13
1/24/2013	18:02:00	14.820	14.660	0.160	0.369	2.16	-0.189	2.27
1/24/2013	18:17:00	14.828	14.668	0.160	0.369	2.16	-0.189	2.27
1/24/2013	18:32:00	14.835	14.669	0.166	0.383	2.16	-0.203	2.44
1/24/2013	18:47:00	14.833	14.680	0.153	0.353	2.16	-0.173	2.08
1/24/2013	19:02:00	14.831	14.684	0.147	0.339	2.16	-0.159	1.91
1/24/2013	19:17:00	14.840	14.668	0.172	0.397	2.16	-0.217	2.60
1/24/2013	19:32:00	14.842	14.682	0.160	0.369	2.16	-0.189	2.27
1/24/2013	19:47:00	14.845	14.685	0.160	0.369	2.16	-0.189	2.27
1/24/2013	20:02:00	14.850	14.678	0.172	0.397	2.16	-0.217	2.60
1/24/2013	20:17:00	14.851	14.690	0.161	0.371	2.16	-0.191	2.30
1/24/2013	20:32:00	14.852	14.688	0.164	0.378	2.16	-0.198	2.38
1/24/2013	20:47:00	14.858	14.696	0.162	0.374	2.16	-0.194	2.32
1/24/2013	21:02:00	14.858	14.682	0.176	0.406	2.16	-0.226	2.71
1/24/2013	21:17:00	14.856	14.702	0.154	0.355	2.16	-0.175	2.10
1/24/2013	21:32:00	14.861	14.693	0.168	0.388	2.16	-0.208	2.49
1/24/2013	21:47:00	14.866	14.694	0.172	0.397	2.16	-0.217	2.60
1/24/2013	22:02:00	14.865	14.699	0.166	0.383	2.16	-0.203	2.44
1/24/2013	22:17:00	14.866	14.705	0.161	0.371	2.16	-0.191	2.30
1/24/2013	22:32:00	14.865	14.690	0.175	0.404	2.16	-0.224	2.68
1/24/2013	22:47:00	14.860	14.695	0.165	0.381	2.16	-0.201	2.41
1/24/2013	23:02:00	14.868	14.706	0.162	0.374	2.16	-0.194	2.32
1/24/2013	23:17:00	14.875	14.711	0.164	0.378	2.16	-0.198	2.38
1/24/2013	23:32:00	14.874	14.713	0.161	0.371	2.16	-0.191	2.30
1/24/2013	23:47:00	14.868	14.692	0.176	0.406	2.16	-0.226	2.71
1/25/2013	0:02:00	14.872	14.710	0.162	0.374	2.16	-0.194	2.32
1/25/2013	0:17:00	14.874	14.695	0.179	0.413	2.16	-0.233	2.80
1/25/2013	0:32:00	14.872	14.712	0.160	0.369	2.16	-0.189	2.27
1/25/2013	0:47:00	14.875	14.714	0.161	0.371	2.16	-0.191	2.30
1/25/2013	1:02:00	14.876	14.705	0.171	0.394	2.16	-0.214	2.57
1/25/2013	1:17:00	14.872	14.716	0.156	0.360	2.16	-0.180	2.16
1/25/2013	1:32:00	14.868	14.707	0.161	0.371	2.16	-0.191	2.30
1/25/2013	1:47:00	14.871	14.718	0.153	0.353	2.16	-0.173	2.08
1/25/2013	2:02:00	14.870	14.719	0.151	0.348	2.16	-0.168	2.02
1/25/2013	2:17:00	14.873	14.720	0.153	0.353	2.16	-0.173	2.08
1/25/2013	2:32:00	14.876	14.696	0.180	0.415	2.16	-0.235	2.82
1/25/2013	2:47:00	14.881	14.690	0.191	0.441	2.16	-0.261	3.13
1/25/2013	3:02:00	14.882	14.681	0.201	0.464	2.16	-0.284	3.40
1/25/2013	3:17:00	14.875	14.705	0.170	0.392	2.16	-0.212	2.55
1/25/2013	3:32:00	14.874	14.683	0.191	0.441	2.16	-0.261	3.13
1/25/2013	3:47:00	14.869	14.703	0.166	0.383	2.16	-0.203	2.44
1/25/2013	4:02:00	14.871	14.690	0.181	0.418	2.16	-0.238	2.85
1/25/2013	4:17:00	14.861	14.709	0.152	0.351	2.16	-0.171	2.05
1/25/2013	4:32:00	14.856	14.704	0.152	0.351	2.16	-0.171	2.05
1/25/2013	4:47:00	14.866	14.689	0.177	0.408	2.16	-0.228	2.74
1/25/2013	5:02:00	14.860	14.680	0.180	0.415	2.16	-0.235	2.82
1/25/2013	5:17:00	14.867	14.690	0.177	0.408	2.16	-0.228	2.74
1/25/2013	5:32:00	14.864	14.701	0.163	0.376	2.16	-0.196	2.35
1/25/2013	5:47:00	14.854	14.691	0.163	0.376	2.16	-0.196	2.35

1/25/2013	6:02:00	14.849	14.689	0.160	0.369	2.16	-0.189	2.27	
1/25/2013	6:17:00	14.857	14.690	0.167	0.385	2.16	-0.205	2.46	
1/25/2013	6:32:00	14.860	14.695	0.165	0.381	2.16	-0.201	2.41	
1/25/2013	6:47:00	14.851	14.672	0.179	0.413	2.16	-0.233	2.80	
1/25/2013	7:02:00	14.850	14.671	0.179	0.413	2.16	-0.233	2.80	
1/25/2013	7:17:00	14.852	14.669	0.183	0.422	2.16	-0.242	2.91	
1/25/2013	7:32:00	14.851	14.674	0.177	0.408	2.16	-0.228	2.74	
1/25/2013	7:47:00	14.854	14.671	0.183	0.422	2.16	-0.242	2.91	
1/25/2013	8:02:00	14.849	14.674	0.175	0.404	2.16	-0.224	2.68	
1/25/2013	8:17:00	14.845	14.677	0.168	0.388	2.16	-0.208	2.49	
1/25/2013	8:32:00	14.849	14.685	0.164	0.378	2.16	-0.198	2.38	
1/25/2013	8:47:00	14.854	14.658	0.196	0.452	2.16	-0.272	3.27	
1/25/2013	9:02:00	14.845	14.678	0.167	0.385	2.16	-0.205	2.46	
1/25/2013	9:17:00	14.841	14.655	0.186	0.429	2.16	-0.249	2.99	
1/25/2013	9:32:00	14.850	14.664	0.186	0.429	2.16	-0.249	2.99	
1/25/2013	9:47:00	14.844	14.655	0.189	0.436	2.16	-0.256	3.07	
1/25/2013	10:02:00	14.840	14.659	0.181	0.418	2.16	-0.238	2.85	
1/25/2013	10:17:00	14.849	14.645	0.204	0.471	2.16	-0.291	3.49	
1/25/2013	10:32:00	14.834	14.638	0.196	0.452	2.16	-0.272	3.27	
1/25/2013	10:47:00	14.830	14.621	0.209	0.482	2.16	-0.302	3.63	
1/25/2013	11:02:00	14.834	14.631	0.203	0.468	2.16	-0.288	3.46	
1/25/2013	11:17:00	14.826	14.619	0.207	0.478	2.16	-0.298	3.57	
1/25/2013	11:32:00	14.820	14.601	0.219	0.505	2.16	-0.325	3.90	
1/25/2013	11:47:00	14.806	14.593	0.213	0.491	2.16	-0.311	3.74	
1/25/2013	12:02:00	14.804	14.584	0.220	0.508	2.16	-0.328	3.93	
1/25/2013	12:17:00	14.797	14.584	0.213	0.491	2.16	-0.311	3.74	
1/25/2013	12:32:00	14.787	14.576	0.211	0.487	2.16	-0.307	3.68	
1/25/2013	12:47:00	14.778	14.577	0.201	0.464	2.16	-0.284	3.40	
1/25/2013	13:02:00	14.774	14.578	0.196	0.452	2.16	-0.272	3.27	
1/25/2013	13:17:00	14.759	14.574	0.185	0.427	2.16	-0.247	2.96	
1/25/2013	13:32:00	14.761	14.570	0.191	0.441	2.16	-0.261	3.13	
1/25/2013	13:47:00	14.753	14.574	0.179	0.413	2.16	-0.233	2.80	
1/25/2013	14:02:00	14.755	14.577	0.178	0.411	2.16	-0.231	2.77	
1/25/2013	14:17:00	14.748	14.575	0.173	0.399	2.16	-0.219	2.63	
1/25/2013	14:32:00	14.749	14.567	0.182	0.420	2.16	-0.240	2.88	
1/25/2013	14:47:00	14.744	14.562	0.182	0.420	2.16	-0.240	2.88	
1/25/2013	15:02:00	14.752	14.553	0.199	0.459	2.16	-0.279	3.35	
1/25/2013	15:17:00	14.754	14.547	0.207	0.478	2.16	-0.298	3.57	
1/25/2013	15:32:00	14.748	14.543	0.205	0.473	2.16	-0.293	3.52	
1/25/2013	15:47:00	14.744	14.539	0.205	0.473	2.16	-0.293	3.52	
1/25/2013	16:02:00	14.742	14.549	0.193	0.445	2.16	-0.265	3.18	
1/25/2013	16:17:00	14.734	14.543	0.191	0.441	2.16	-0.261	3.13	
1/25/2013	16:32:00	14.723	14.542	0.181	0.418	2.16	-0.238	2.85	
1/25/2013	16:47:00	14.712	14.535	0.177	0.408	2.16	-0.228	2.74	
1/25/2013	17:02:00	14.729	14.541	0.188	0.434	2.16	-0.254	3.04	
1/25/2013	17:17:00	14.728	14.538	0.190	0.438	2.16	-0.258	3.10	
1/25/2013	17:32:00	14.722	14.530	0.192	0.443	2.16	-0.263	3.16	
1/25/2013	17:47:00	14.724	14.535	0.189	0.436	2.16	-0.256	3.07	
1/25/2013	18:02:00	14.722	14.536	0.186	0.429	2.16	-0.249	2.99	
1/25/2013	18:17:00	14.721	14.534	0.187	0.431	2.16	-0.251	3.02	
1/25/2013	18:32:00	14.719	14.535	0.184	0.424	2.16	-0.244	2.93	
1/25/2013	18:47:00	14.723	14.537	0.186	0.429	2.16	-0.249	2.99	
1/25/2013	19:02:00	14.717	14.538	0.179	0.413	2.16	-0.233	2.80	
1/25/2013	19:17:00	14.714	14.533	0.181	0.418	2.16	-0.238	2.85	
1/25/2013	19:32:00	14.708	14.536	0.172	0.397	2.16	-0.217	2.60	
1/25/2013	19:47:00	14.709	14.531	0.178	0.411	2.16	-0.231	2.77	
1/25/2013	20:02:00	14.714	14.538	0.176	0.406	2.16	-0.226	2.71	
1/25/2013	20:17:00	14.712	14.538	0.174	0.401	2.16	-0.221	2.66	
1/25/2013	20:32:00	14.712	14.533	0.179	0.413	2.16	-0.233	2.80	
1/25/2013	20:47:00	14.711	14.534	0.177	0.408	2.16	-0.228	2.74	
1/25/2013	21:02:00	14.708	14.529	0.179	0.413	2.16	-0.233	2.80	
1/25/2013	21:17:00	14.710	14.529	0.181	0.418	2.16	-0.238	2.85	
1/25/2013	21:32:00	14.708	14.529	0.179	0.413	2.16	-0.233	2.80	
1/25/2013	21:47:00	14.704	14.526	0.178	0.411	2.16	-0.231	2.77	
1/25/2013	22:02:00	14.705	14.527	0.178	0.411	2.16	-0.231	2.77	
1/25/2013	22:17:00	14.706	14.529	0.177	0.408	2.16	-0.228	2.74	
1/25/2013	22:32:00	14.710	14.522	0.188	0.434	2.16	-0.254	3.04	
1/25/2013	22:47:00	14.698	14.527	0.171	0.394	2.16	-0.214	2.57	
1/25/2013	23:02:00	14.701	14.521	0.180	0.415	2.16	-0.235	2.82	
1/25/2013	23:17:00	14.697	14.523	0.174	0.401	2.16	-0.221	2.66	
1/25/2013	23:32:00	14.698	14.522	0.176	0.406	2.16	-0.226	2.71	
1/25/2013	23:47:00	14.697	14.518	0.179	0.413	2.16	-0.233	2.80	
1/26/2013	0:02:00	14.696	14.516	0.180	0.415	2.16	-0.235	2.82	
1/26/2013	0:17:00	14.696	14.519	0.177	0.408	2.16	-0.228	2.74	
1/26/2013	0:32:00	14.695	14.517	0.178	0.411	2.16	-0.231	2.77	
1/26/2013	0:47:00	14.694	14.521	0.173	0.399	2.16	-0.219	2.63	
1/26/2013	1:02:00	14.687	14.523	0.164	0.378	2.16	-0.198	2.38	
1/26/2013	1:17:00	14.687	14.511	0.176	0.406	2.16	-0.226	2.71	
1/26/2013	1:32:00	14.692	14.514	0.178	0.411	2.16	-0.231	2.77	
1/26/2013	1:47:00	14.690	14.519	0.171	0.394	2.16	-0.214	2.57	
1/26/2013	2:02:00	14.690	14.515	0.175	0.404	2.16	-0.224	2.68	
1/26/2013	2:17:00	14.689	14.509	0.180	0.415	2.16	-0.235	2.82	
1/26/2013	2:32:00	14.684	14.514	0.170	0.392	2.16	-0.212	2.55	
1/26/2013	2:47:00	14.689	14.509	0.180	0.415	2.16	-0.235	2.82	
1/26/2013	3:02:00	14.686	14.510	0.176	0.406	2.16	-0.226	2.71	
1/26/2013	3:17:00	14.689	14.516	0.173	0.399	2.16	-0.219	2.63	
1/26/2013	3:32:00	14.681	14.512	0.169	0.390	2.16	-0.210	2.52	
1/26/2013	3:47:00	14.685	14.518	0.167	0.385	2.16	-0.205	2.46	
1/26/2013	4:02:00	14.686	14.516	0.170	0.392	2.16	-0.212	2.55	
1/26/2013	4:17:00	14.684	14.517	0.167	0.385	2.16	-0.205	2.46	
1/26/2013	4:32:00	14.685	14.515	0.170	0.392	2.16	-0.212	2.55	
1/26/2013	4:47:00	14.686	14.507	0.179	0.413	2.16	-0.233	2.80	
1/26/2013	5:02:00	14.688	14.513	0.175	0.404	2.16	-0.224	2.68	
1/26/2013	5:17:00	14.685	14.517	0.168	0.388	2.16	-0.208	2.49	
1/26/2013	5:32:00	14.689	14.524	0.165	0.381	2.16	-0.201	2.41	
1/26/2013	5:47:00	14.690	14.525	0.165	0.381	2.16	-0.201	2.41	
1/26/2013	6:02:00	14.683	14.538	0.145	0.335	2.16	-0.155	1.85	
1/26/2013	6:17:00	14.690	14.542	0.148	0.341	2.16	-0.161	1.94	
1/26/2013	6:32:00	14.693	14.543	0.150	0.346	2.16	-0.166	1.99	
1/26/2013	6:47:00	14.693	14.549	0.144	0.332	2.16	-0.152	1.83	
1/26/2013	7:02:00	14.702	14.553	0.149	0.344	2.16	-0.164	1.96	
1/26/2013	7:17:00	14.710	14.551	0.159	0.367	2.16	-0.187	2.24	
1/26/2013	7:32:00	14.712	14.558	0.154	0.355	2.16	-0.175	2.10	
1/26/2013	7:47:00	14.717	14.560	0.157	0.362	2.16	-0.182	2.19	
1/26/2013	8:02:00	14.724	14.562	0.162	0.374	2.16	-0.194	2.32	
1/26/2013	8:17:00	14.719	14.561	0.158	0.365	2.16	-0.185	2.21	
1/26/2013	8:32:00	14.730	14.566	0.164	0.378	2.16	-0.198	2.38	
1/26/2013	8:47:00	14.731	14.566	0.165	0.381	2.16	-0.201	2.41	
1/26/2013	9:02:00	14.727	14.571	0.156	0.360	2.16	-0.180	2.16	
1/26/2013	9:17:00	14.734	14.573	0.161	0.371	2.16	-0.191	2.30	0.02
1/26/2013	9:32:00	14.737	14.576	0.161	0.371	2.16	-0.191	2.30	0.04
1/26/2013	9:47:00	14.737	14.568	0.169	0.390	2.16	-0.210	2.52	0.06
1/26/2013	10:02:00	14.743	14.574	0.169	0.390	2.16	-0.210	2.52	0.08
1/26/2013	10:17:00	14.744	14.577	0.167	0.385	2.16	-0.205	2.46	
1/26/2013	10:32:00	14.748	14.579	0.169	0.390	2.16	-0.210	2.52	
1/26/2013	10:47:00	14.757	14.581	0.176	0.406	2.16	-0.226	2.71	
1/26/2013	11:02:00	14.751	14.579	0.172	0.397	2.16	-0.217	2.60	
1/26/2013	11:17:00	14.760	14.577	0.183	0.422	2.16	-0.242	2.91	
1/26/2013	11:32:00	14.758	14.573	0.185	0.427	2.16	-0.247	2.96	
1/26/2013	11:47:00	14.758	14.570	0.188	0.434	2.16	-0.254	3.04	
1/26/2013	12:02:00	14.761	14.567	0.194	0.448	2.16	-0.268	3.21	
1/26/2013	12:17:00	14.759	14.564	0.195	0.450	2.16	-0.270	3.24	
1/26/2013	12:32:00	14.763	14.561	0.202	0.466	2.16	-0.286	3.43	
1/26/2013	12:47:00	14.755	14.563	0.192	0.443	2.16	-0.263	3.16	
1/26/2013	13:02:00	14.755	14.559	0.196	0.452	2.16	-0.272	3.27	
1/26/2013	13:17:00	14.755	14.558	0.197	0.454	2.16	-0.274	3.29	
1/26/2013	13:32:00	14.752	14.563	0.189	0.436	2.16	-0.256	3.07	
1/26/2013	13:47:00	14.756	14.561	0.195	0.450	2.16	-0.270	3.24	
1/26/2013	14:02:00	14.752	14.562	0.190	0.438	2.16	-0.258	3.10	
1/26/2013	14:17:00	14.746	14.567	0.179	0.413	2.16	-0.233	2.80	
1/26/2013	14:32:00	14.748	14.570	0.178	0.411	2.16	-0.231	2.77	
1/26/2013	14:47:00	14.747	14.564	0.183	0.422	2.16	-0.242	2.91	
1/26/2013	15:02:00	14.748	14.568	0.180	0.415	2.16	-0.235	2.82	

1/26/2013	15:17:00	14.745	14.568	0.177	0.408	2.16	-0.228	2.74
1/26/2013	15:32:00	14.748	14.575	0.173	0.399	2.16	-0.219	2.63
1/26/2013	15:47:00	14.753	14.574	0.179	0.413	2.16	-0.233	2.80
1/26/2013	16:02:00	14.751	14.573	0.178	0.411	2.16	-0.231	2.77
1/26/2013	16:17:00	14.748	14.578	0.170	0.392	2.16	-0.212	2.55
1/26/2013	16:32:00	14.751	14.576	0.175	0.404	2.16	-0.224	2.68
1/26/2013	16:47:00	14.751	14.569	0.182	0.420	2.16	-0.240	2.88
1/26/2013	17:02:00	14.752	14.588	0.164	0.378	2.16	-0.198	2.38
1/26/2013	17:17:00	14.756	14.588	0.168	0.388	2.16	-0.208	2.49
1/26/2013	17:32:00	14.758	14.586	0.172	0.397	2.16	-0.217	2.60
1/26/2013	17:47:00	14.756	14.593	0.163	0.376	2.16	-0.196	2.35
1/26/2013	18:02:00	14.760	14.594	0.166	0.383	2.16	-0.203	2.44
1/26/2013	18:17:00	14.763	14.594	0.169	0.390	2.16	-0.210	2.52
1/26/2013	18:32:00	14.763	14.592	0.171	0.394	2.16	-0.214	2.57
1/26/2013	18:47:00	14.767	14.598	0.169	0.390	2.16	-0.210	2.52
1/26/2013	19:02:00	14.766	14.599	0.167	0.385	2.16	-0.205	2.46
1/26/2013	19:17:00	14.765	14.602	0.163	0.376	2.16	-0.196	2.35
1/26/2013	19:32:00	14.771	14.604	0.167	0.385	2.16	-0.205	2.46
1/26/2013	19:47:00	14.775	14.603	0.172	0.397	2.16	-0.217	2.60
1/26/2013	20:02:00	14.774	14.609	0.165	0.381	2.16	-0.201	2.41
1/26/2013	20:17:00	14.776	14.607	0.169	0.390	2.16	-0.210	2.52
1/26/2013	20:32:00	14.778	14.611	0.167	0.385	2.16	-0.205	2.46
1/26/2013	20:47:00	14.779	14.616	0.163	0.376	2.16	-0.196	2.35
1/26/2013	21:02:00	14.777	14.622	0.155	0.358	2.16	-0.178	2.13
1/26/2013	21:17:00	14.780	14.621	0.159	0.367	2.16	-0.187	2.24
1/26/2013	21:32:00	14.783	14.626	0.157	0.362	2.16	-0.182	2.19
1/26/2013	21:47:00	14.789	14.627	0.162	0.374	2.16	-0.194	2.32
1/26/2013	22:02:00	14.790	14.631	0.159	0.367	2.16	-0.187	2.24
1/26/2013	22:17:00	14.794	14.631	0.163	0.376	2.16	-0.196	2.35
1/26/2013	22:32:00	14.795	14.639	0.156	0.360	2.16	-0.180	2.16
1/26/2013	22:47:00	14.796	14.633	0.163	0.376	2.16	-0.196	2.35
1/26/2013	23:02:00	14.804	14.637	0.167	0.385	2.16	-0.205	2.46
1/26/2013	23:17:00	14.799	14.644	0.155	0.358	2.16	-0.178	2.13
1/26/2013	23:32:00	14.808	14.645	0.163	0.376	2.16	-0.196	2.35
1/26/2013	23:47:00	14.810	14.643	0.167	0.385	2.16	-0.205	2.46
1/27/2013	0:02:00	14.808	14.646	0.162	0.374	2.16	-0.194	2.32
1/27/2013	0:17:00	14.810	14.646	0.164	0.378	2.16	-0.198	2.38
1/27/2013	0:32:00	14.817	14.653	0.164	0.378	2.16	-0.198	2.38
1/27/2013	0:47:00	14.816	14.655	0.161	0.371	2.16	-0.191	2.30
1/27/2013	1:02:00	14.814	14.661	0.153	0.353	2.16	-0.173	2.08
1/27/2013	1:17:00	14.818	14.659	0.159	0.367	2.16	-0.187	2.24
1/27/2013	1:32:00	14.814	14.664	0.150	0.346	2.16	-0.166	1.99
1/27/2013	1:47:00	14.820	14.664	0.156	0.360	2.16	-0.180	2.16
1/27/2013	2:02:00	14.825	14.669	0.156	0.360	2.16	-0.180	2.16
1/27/2013	2:17:00	14.826	14.667	0.159	0.367	2.16	-0.187	2.24
1/27/2013	2:32:00	14.825	14.670	0.155	0.358	2.16	-0.178	2.13
1/27/2013	2:47:00	14.828	14.670	0.158	0.365	2.16	-0.185	2.21
1/27/2013	3:02:00	14.838	14.668	0.170	0.392	2.16	-0.212	2.55
1/27/2013	3:17:00	14.836	14.663	0.173	0.399	2.16	-0.219	2.63
1/27/2013	3:32:00	14.834	14.670	0.164	0.378	2.16	-0.198	2.38
1/27/2013	3:47:00	14.832	14.673	0.159	0.367	2.16	-0.187	2.24
1/27/2013	4:02:00	14.834	14.673	0.161	0.371	2.16	-0.191	2.30
1/27/2013	4:17:00	14.842	14.672	0.170	0.392	2.16	-0.212	2.55
1/27/2013	4:32:00	14.842	14.675	0.167	0.385	2.16	-0.205	2.46
1/27/2013	4:47:00	14.841	14.680	0.161	0.371	2.16	-0.191	2.30
1/27/2013	5:02:00	14.840	14.685	0.155	0.358	2.16	-0.178	2.13
1/27/2013	5:17:00	14.839	14.688	0.151	0.348	2.16	-0.168	2.02
1/27/2013	5:32:00	14.843	14.692	0.151	0.348	2.16	-0.168	2.02
1/27/2013	5:47:00	14.848	14.689	0.159	0.367	2.16	-0.187	2.24
1/27/2013	6:02:00	14.851	14.695	0.156	0.360	2.16	-0.180	2.16
1/27/2013	6:17:00	14.857	14.694	0.163	0.376	2.16	-0.196	2.35
1/27/2013	6:32:00	14.855	14.701	0.154	0.355	2.16	-0.175	2.10
1/27/2013	6:47:00	14.863	14.706	0.157	0.362	2.16	-0.182	2.19
1/27/2013	7:02:00	14.868	14.700	0.168	0.388	2.16	-0.208	2.49
1/27/2013	7:17:00	14.866	14.720	0.146	0.337	2.16	-0.157	1.88
1/27/2013	7:32:00	14.866	14.718	0.148	0.341	2.16	-0.161	1.94
1/27/2013	7:47:00	14.872	14.721	0.151	0.348	2.16	-0.168	2.02
1/27/2013	8:02:00	14.876	14.718	0.158	0.365	2.16	-0.185	2.21
1/27/2013	8:17:00	14.879	14.722	0.157	0.362	2.16	-0.182	2.19
1/27/2013	8:32:00	14.886	14.729	0.157	0.362	2.16	-0.182	2.19
1/27/2013	8:47:00	14.888	14.723	0.165	0.381	2.16	-0.201	2.41
1/27/2013	9:02:00	14.891	14.730	0.161	0.371	2.16	-0.191	2.30
1/27/2013	9:17:00	14.894	14.727	0.167	0.385	2.16	-0.205	2.46
1/27/2013	9:32:00	14.897	14.731	0.166	0.383	2.16	-0.203	2.44
1/27/2013	9:47:00	14.896	14.735	0.161	0.371	2.16	-0.191	2.30
1/27/2013	10:02:00	14.902	14.731	0.171	0.394	2.16	-0.214	2.57
1/27/2013	10:17:00	14.906	14.723	0.183	0.422	2.16	-0.242	2.91
1/27/2013	10:32:00	14.908	14.726	0.182	0.420	2.16	-0.240	2.88
1/27/2013	10:47:00	14.907	14.722	0.185	0.427	2.16	-0.247	2.96
1/27/2013	11:02:00	14.907	14.707	0.200	0.461	2.16	-0.281	3.38
1/27/2013	11:17:00	14.909	14.717	0.192	0.443	2.16	-0.263	3.16
1/27/2013	11:32:00	14.903	14.721	0.182	0.420	2.16	-0.240	2.88
1/27/2013	11:47:00	14.904	14.713	0.191	0.441	2.16	-0.261	3.13
1/27/2013	12:02:00	14.900	14.711	0.189	0.436	2.16	-0.256	3.07
1/27/2013	12:17:00	14.892	14.703	0.189	0.436	2.16	-0.256	3.07
1/27/2013	12:32:00	14.891	14.704	0.187	0.431	2.16	-0.251	3.02
1/27/2013	12:47:00	14.894	14.700	0.194	0.448	2.16	-0.268	3.21
1/27/2013	13:02:00	14.898	14.704	0.194	0.448	2.16	-0.268	3.21
1/27/2013	13:17:00	14.888	14.705	0.183	0.422	2.16	-0.242	2.91
1/27/2013	13:32:00	14.876	14.691	0.185	0.427	2.16	-0.247	2.96
1/27/2013	13:47:00	14.873	14.694	0.179	0.413	2.16	-0.233	2.80
1/27/2013	14:02:00	14.876	14.696	0.180	0.415	2.16	-0.235	2.82
1/27/2013	14:17:00	14.878	14.688	0.190	0.438	2.16	-0.258	3.10
1/27/2013	14:32:00	14.876	14.685	0.191	0.441	2.16	-0.261	3.13
1/27/2013	14:47:00	14.870	14.690	0.180	0.415	2.16	-0.235	2.82
1/27/2013	15:02:00	14.873	14.694	0.179	0.413	2.16	-0.233	2.80
1/27/2013	15:17:00	14.870	14.692	0.178	0.411	2.16	-0.231	2.77
1/27/2013	15:32:00	14.863	14.685	0.178	0.411	2.16	-0.231	2.77
1/27/2013	15:47:00	14.868	14.695	0.173	0.399	2.16	-0.219	2.63
1/27/2013	16:02:00	14.869	14.702	0.167	0.385	2.16	-0.205	2.46
1/27/2013	16:17:00	14.863	14.698	0.165	0.381	2.16	-0.201	2.41
1/27/2013	16:32:00	14.867	14.700	0.167	0.385	2.16	-0.205	2.46
1/27/2013	16:47:00	14.866	14.700	0.166	0.383	2.16	-0.203	2.44
1/27/2013	17:02:00	14.870	14.695	0.175	0.404	2.16	-0.224	2.68
1/27/2013	17:17:00	14.871	14.708	0.163	0.376	2.16	-0.196	2.35
1/27/2013	17:32:00	14.873	14.723	0.150	0.346	2.16	-0.166	1.99
1/27/2013	17:47:00	14.875	14.706	0.169	0.390	2.16	-0.210	2.52
1/27/2013	18:02:00	14.871	14.709	0.162	0.374	2.16	-0.194	2.32
1/27/2013	18:17:00	14.873	14.702	0.171	0.394	2.16	-0.214	2.57
1/27/2013	18:32:00	14.879	14.704	0.175	0.404	2.16	-0.224	2.68
1/27/2013	18:47:00	14.882	14.705	0.177	0.408	2.16	-0.228	2.74
1/27/2013	19:02:00	14.882	14.703	0.179	0.413	2.16	-0.233	2.80
1/27/2013	19:17:00	14.881	14.705	0.176	0.406	2.16	-0.226	2.71
1/27/2013	19:32:00	14.876	14.708	0.168	0.388	2.16	-0.208	2.49
1/27/2013	19:47:00	14.878	14.705	0.173	0.399	2.16	-0.219	2.63
1/27/2013	20:02:00	14.876	14.709	0.167	0.385	2.16	-0.205	2.46
1/27/2013	20:17:00	14.880	14.700	0.180	0.415	2.16	-0.235	2.82
1/27/2013	20:32:00	14.878	14.710	0.168	0.388	2.16	-0.208	2.49
1/27/2013	20:47:00	14.880	14.711	0.169	0.390	2.16	-0.210	2.52
1/27/2013	21:02:00	14.874	14.693	0.181	0.418	2.16	-0.238	2.85
1/27/2013	21:17:00	14.878	14.696	0.182	0.420	2.16	-0.240	2.88
1/27/2013	21:32:00	14.882	14.696	0.186	0.429	2.16	-0.249	2.99
1/27/2013	21:47:00	14.876	14.701	0.175	0.404	2.16	-0.224	2.68
1/27/2013	22:02:00	14.877	14.689	0.188	0.434	2.16	-0.254	3.04
1/27/2013	22:17:00	14.872	14.684	0.188	0.434	2.16	-0.254	3.04
1/27/2013	22:32:00	14.878	14.690	0.188	0.434	2.16	-0.254	3.04
1/27/2013	22:47:00	14.876	14.690	0.186	0.429	2.16	-0.249	2.99
1/27/2013	23:02:00	14.870	14.691	0.179	0.413	2.16	-0.233	2.80
1/27/2013	23:17:00	14.873	14.694	0.179	0.413	2.16	-0.233	2.80
1/27/2013	23:32:00	14.867	14.692	0.175	0.404	2.16	-0.224	2.68
1/27/2013	23:47:00	14.869	14.689	0.180	0.415	2.16	-0.235	2.82
1/28/2013	0:02:00	14.864	14.690	0.174	0.401	2.16	-0.221	2.66
1/28/2013	0:17:00	14.863	14.682	0.181	0.418	2.16	-0.238	2.85

1/28/2013	0:32:00	14.870	14.683	0.187	0.431	2.16	-0.251	3.02
1/28/2013	0:47:00	14.862	14.683	0.179	0.413	2.16	-0.233	2.80
1/28/2013	1:02:00	14.861	14.686	0.175	0.404	2.16	-0.224	2.68
1/28/2013	1:17:00	14.855	14.682	0.173	0.399	2.16	-0.219	2.63
1/28/2013	1:32:00	14.859	14.681	0.178	0.411	2.16	-0.231	2.77
1/28/2013	1:47:00	14.856	14.687	0.169	0.390	2.16	-0.210	2.52
1/28/2013	2:02:00	14.859	14.676	0.183	0.422	2.16	-0.242	2.91
1/28/2013	2:17:00	14.858	14.678	0.180	0.415	2.16	-0.235	2.82
1/28/2013	2:32:00	14.859	14.685	0.174	0.401	2.16	-0.221	2.66
1/28/2013	2:47:00	14.864	14.675	0.189	0.436	2.16	-0.256	3.07
1/28/2013	3:02:00	14.853	14.676	0.177	0.408	2.16	-0.228	2.74
1/28/2013	3:17:00	14.853	14.680	0.173	0.399	2.16	-0.219	2.63
1/28/2013	3:32:00	14.856	14.671	0.185	0.427	2.16	-0.247	2.96
1/28/2013	3:47:00	14.854	14.675	0.179	0.413	2.16	-0.233	2.80
1/28/2013	4:02:00	14.848	14.672	0.176	0.406	2.16	-0.226	2.71
1/28/2013	4:17:00	14.857	14.681	0.176	0.406	2.16	-0.226	2.71
1/28/2013	4:32:00	14.848	14.676	0.172	0.397	2.16	-0.217	2.60
1/28/2013	4:47:00	14.845	14.682	0.163	0.376	2.16	-0.196	2.35
1/28/2013	5:02:00	14.845	14.683	0.162	0.374	2.16	-0.194	2.32
1/28/2013	5:17:00	14.848	14.679	0.169	0.390	2.16	-0.210	2.52
1/28/2013	5:32:00	14.853	14.679	0.174	0.401	2.16	-0.221	2.66
1/28/2013	5:47:00	14.846	14.680	0.166	0.383	2.16	-0.203	2.44
1/28/2013	6:02:00	14.853	14.690	0.163	0.376	2.16	-0.196	2.35
1/28/2013	6:17:00	14.853	14.686	0.167	0.385	2.16	-0.205	2.46
1/28/2013	6:32:00	14.846	14.687	0.159	0.367	2.16	-0.187	2.24
1/28/2013	6:47:00	14.851	14.693	0.158	0.365	2.16	-0.185	2.21
1/28/2013	7:02:00	14.855	14.684	0.171	0.394	2.16	-0.214	2.57
1/28/2013	7:17:00	14.860	14.679	0.181	0.418	2.16	-0.238	2.85
1/28/2013	7:32:00	14.862	14.683	0.179	0.413	2.16	-0.233	2.80
1/28/2013	7:47:00	14.862	14.673	0.189	0.436	2.16	-0.256	3.07
1/28/2013	8:02:00	14.854	14.670	0.184	0.424	2.16	-0.244	2.93
1/28/2013	8:17:00	14.859	14.679	0.180	0.415	2.16	-0.235	2.82
1/28/2013	8:32:00	14.852	14.680	0.172	0.397	2.16	-0.217	2.60
1/28/2013	8:47:00	14.847	14.672	0.175	0.404	2.16	-0.224	2.68
1/28/2013	9:02:00	14.852	14.677	0.175	0.404	2.16	-0.224	2.68
1/28/2013	9:17:00	14.856	14.676	0.180	0.415	2.16	-0.235	2.82
1/28/2013	9:32:00	14.853	14.672	0.181	0.418	2.16	-0.238	2.85
1/28/2013	9:47:00	14.850	14.670	0.180	0.415	2.16	-0.235	2.82
1/28/2013	10:02:00	14.849	14.665	0.184	0.424	2.16	-0.244	2.93
1/28/2013	10:17:00	14.847	14.667	0.180	0.415	2.16	-0.235	2.82
1/28/2013	10:32:00	14.847	14.664	0.183	0.422	2.16	-0.242	2.91
1/28/2013	10:47:00	14.847	14.658	0.189	0.436	2.16	-0.256	3.07
1/28/2013	11:02:00	14.838	14.653	0.185	0.427	2.16	-0.247	2.96
1/28/2013	11:17:00	14.844	14.645	0.199	0.459	2.16	-0.279	3.35
1/28/2013	11:32:00	14.842	14.641	0.201	0.464	2.16	-0.284	3.40
1/28/2013	11:47:00	14.835	14.636	0.199	0.459	2.16	-0.279	3.35
1/28/2013	12:02:00	14.830	14.631	0.199	0.459	2.16	-0.279	3.35
1/28/2013	12:17:00	14.823	14.626	0.197	0.454	2.16	-0.274	3.29
1/28/2013	12:32:00	14.819	14.620	0.199	0.459	2.16	-0.279	3.35
1/28/2013	12:47:00	14.814	14.615	0.199	0.459	2.16	-0.279	3.35
1/28/2013	13:02:00	14.805	14.615	0.190	0.438	2.16	-0.258	3.10
1/28/2013	13:17:00	14.805	14.609	0.196	0.452	2.16	-0.272	3.27
1/28/2013	13:32:00	14.800	14.612	0.188	0.434	2.16	-0.254	3.04
1/28/2013	13:47:00	14.800	14.607	0.193	0.445	2.16	-0.265	3.18
1/28/2013	14:02:00	14.793	14.611	0.182	0.420	2.16	-0.240	2.88
1/28/2013	14:17:00	14.794	14.606	0.188	0.434	2.16	-0.254	3.04
1/28/2013	14:32:00	14.791	14.600	0.191	0.441	2.16	-0.261	3.13
1/28/2013	14:47:00	14.791	14.598	0.193	0.445	2.16	-0.265	3.18
1/28/2013	15:02:00	14.782	14.598	0.184	0.424	2.16	-0.244	2.93
1/28/2013	15:17:00	14.785	14.600	0.185	0.427	2.16	-0.247	2.96
1/28/2013	15:32:00	14.786	14.595	0.191	0.441	2.16	-0.261	3.13
1/28/2013	15:47:00	14.782	14.600	0.182	0.420	2.16	-0.240	2.88
1/28/2013	16:02:00	14.777	14.594	0.183	0.422	2.16	-0.242	2.91
1/28/2013	16:17:00	14.778	14.594	0.184	0.424	2.16	-0.244	2.93
1/28/2013	16:32:00	14.771	14.595	0.176	0.406	2.16	-0.226	2.71
1/28/2013	16:47:00	14.772	14.600	0.172	0.397	2.16	-0.217	2.60
1/28/2013	17:02:00	14.776	14.598	0.178	0.411	2.16	-0.231	2.77
1/28/2013	17:17:00	14.774	14.597	0.177	0.408	2.16	-0.228	2.74
1/28/2013	17:32:00	14.776	14.603	0.173	0.399	2.16	-0.219	2.63
1/28/2013	17:47:00	14.773	14.599	0.174	0.401	2.16	-0.221	2.66
1/28/2013	18:02:00	14.774	14.595	0.179	0.413	2.16	-0.233	2.80
1/28/2013	18:17:00	14.770	14.599	0.171	0.394	2.16	-0.214	2.57
1/28/2013	18:32:00	14.773	14.598	0.175	0.404	2.16	-0.224	2.68
1/28/2013	18:47:00	14.779	14.592	0.187	0.431	2.16	-0.251	3.02
1/28/2013	19:02:00	14.774	14.592	0.182	0.420	2.16	-0.240	2.88
1/28/2013	19:17:00	14.779	14.598	0.181	0.418	2.16	-0.238	2.85
1/28/2013	19:32:00	14.775	14.593	0.182	0.420	2.16	-0.240	2.88
1/28/2013	19:47:00	14.777	14.587	0.190	0.438	2.16	-0.258	3.10
1/28/2013	20:02:00	14.775	14.594	0.181	0.418	2.16	-0.238	2.85
1/28/2013	20:17:00	14.775	14.593	0.182	0.420	2.16	-0.240	2.88
1/28/2013	20:32:00	14.770	14.594	0.176	0.406	2.16	-0.226	2.71
1/28/2013	20:47:00	14.770	14.585	0.185	0.427	2.16	-0.247	2.96
1/28/2013	21:02:00	14.773	14.586	0.187	0.431	2.16	-0.251	3.02
1/28/2013	21:17:00	14.769	14.585	0.184	0.424	2.16	-0.244	2.93
1/28/2013	21:32:00	14.770	14.587	0.183	0.422	2.16	-0.242	2.91
1/28/2013	21:47:00	14.772	14.581	0.191	0.441	2.16	-0.261	3.13
1/28/2013	22:02:00	14.768	14.582	0.186	0.429	2.16	-0.249	2.99
1/28/2013	22:17:00	14.765	14.587	0.178	0.411	2.16	-0.231	2.77
1/28/2013	22:32:00	14.761	14.585	0.176	0.406	2.16	-0.226	2.71
1/28/2013	22:47:00	14.760	14.585	0.175	0.404	2.16	-0.224	2.68
1/28/2013	23:02:00	14.760	14.585	0.175	0.404	2.16	-0.224	2.68
1/28/2013	23:17:00	14.764	14.578	0.186	0.429	2.16	-0.249	2.99
1/28/2013	23:32:00	14.764	14.576	0.188	0.434	2.16	-0.254	3.04
1/28/2013	23:47:00	14.763	14.572	0.191	0.441	2.16	-0.261	3.13
1/29/2013	0:02:00	14.764	14.570	0.194	0.448	2.16	-0.268	3.21
1/29/2013	0:17:00	14.759	14.568	0.191	0.441	2.16	-0.261	3.13
1/29/2013	0:32:00	14.755	14.568	0.187	0.431	2.16	-0.251	3.02
1/29/2013	0:47:00	14.752	14.572	0.180	0.415	2.16	-0.235	2.82
1/29/2013	1:02:00	14.751	14.570	0.181	0.418	2.16	-0.238	2.85
1/29/2013	1:17:00	14.749	14.574	0.175	0.404	2.16	-0.224	2.68
1/29/2013	1:32:00	14.742	14.568	0.174	0.401	2.16	-0.221	2.66
1/29/2013	1:47:00	14.752	14.571	0.181	0.418	2.16	-0.238	2.85
1/29/2013	2:02:00	14.750	14.568	0.182	0.420	2.16	-0.240	2.88
1/29/2013	2:17:00	14.748	14.564	0.184	0.424	2.16	-0.244	2.93
1/29/2013	2:32:00	14.752	14.553	0.199	0.459	2.16	-0.279	3.35
1/29/2013	2:47:00	14.748	14.566	0.182	0.420	2.16	-0.240	2.88
1/29/2013	3:02:00	14.752	14.570	0.182	0.420	2.16	-0.240	2.88
1/29/2013	3:17:00	14.747	14.562	0.185	0.427	2.16	-0.247	2.96
1/29/2013	3:32:00	14.746	14.562	0.184	0.424	2.16	-0.244	2.93
1/29/2013	3:47:00	14.748	14.569	0.179	0.413	2.16	-0.233	2.80
1/29/2013	4:02:00	14.744	14.559	0.185	0.427	2.16	-0.247	2.96
1/29/2013	4:17:00	14.746	14.562	0.184	0.424	2.16	-0.244	2.93
1/29/2013	4:32:00	14.740	14.565	0.175	0.404	2.16	-0.224	2.68
1/29/2013	4:47:00	14.737	14.564	0.173	0.399	2.16	-0.219	2.63
1/29/2013	5:02:00	14.742	14.564	0.178	0.411	2.16	-0.231	2.77
1/29/2013	5:17:00	14.736	14.561	0.175	0.404	2.16	-0.224	2.68
1/29/2013	5:32:00	14.737	14.567	0.170	0.392	2.16	-0.212	2.55
1/29/2013	5:47:00	14.739	14.562	0.177	0.408	2.16	-0.228	2.74
1/29/2013	6:02:00	14.741	14.561	0.180	0.415	2.16	-0.235	2.82
1/29/2013	6:17:00	14.746	14.566	0.180	0.415	2.16	-0.235	2.82
1/29/2013	6:32:00	14.744	14.562	0.182	0.420	2.16	-0.240	2.88
1/29/2013	6:47:00	14.742	14.569	0.173	0.399	2.16	-0.219	2.63
1/29/2013	7:02:00	14.739	14.567	0.172	0.397	2.16	-0.217	2.60
1/29/2013	7:17:00	14.740	14.567	0.173	0.399	2.16	-0.219	2.63
1/29/2013	7:32:00	14.743	14.576	0.167	0.385	2.16	-0.205	2.46
1/29/2013	7:47:00	14.739	14.565	0.174	0.401	2.16	-0.221	2.66
1/29/2013	8:02:00	14.745	14.575	0.170	0.392	2.16	-0.212	2.55
1/29/2013	8:17:00	14.746	14.566	0.180	0.415	2.16	-0.235	2.82
1/29/2013	8:32:00	14.740	14.569	0.171	0.394	2.16	-0.214	2.57
1/29/2013	8:47:00	14.738	14.563	0.175	0.404	2.16	-0.224	2.68
1/29/2013	9:02:00	14.744	14.567	0.177	0.408	2.16	-0.228	2.74
1/29/2013	9:17:00	14.743	14.567	0.176	0.406	2.16	-0.226	2.71
1/29/2013	9:32:00	14.745	14.566	0.179	0.413	2.16	-0.233	2.80

1/29/2013	9:47:00	14.744	14.563	0.181	0.418	2.16	-0.238	2.85
1/29/2013	10:02:00	14.745	14.558	0.187	0.431	2.16	-0.251	3.02
1/29/2013	10:17:00	14.746	14.560	0.186	0.429	2.16	-0.249	2.99
1/29/2013	10:32:00	14.744	14.554	0.190	0.438	2.16	-0.258	3.10
1/29/2013	10:47:00	14.744	14.551	0.193	0.445	2.16	-0.265	3.18
1/29/2013	11:02:00	14.745	14.545	0.200	0.461	2.16	-0.281	3.38
1/29/2013	11:17:00	14.742	14.543	0.199	0.459	2.16	-0.279	3.35
1/29/2013	11:32:00	14.740	14.534	0.206	0.475	2.16	-0.295	3.54
1/29/2013	11:47:00	14.731	14.536	0.195	0.450	2.16	-0.270	3.24
1/29/2013	12:02:00	14.729	14.529	0.200	0.461	2.16	-0.281	3.38
1/29/2013	12:17:00	14.718	14.526	0.192	0.443	2.16	-0.263	3.16
1/29/2013	12:32:00	14.716	14.525	0.191	0.441	2.16	-0.261	3.13
1/29/2013	12:47:00	14.714	14.521	0.193	0.445	2.16	-0.265	3.18
1/29/2013	13:02:00	14.712	14.516	0.196	0.452	2.16	-0.272	3.27
1/29/2013	13:17:00	14.700	14.510	0.190	0.438	2.16	-0.258	3.10
1/29/2013	13:32:00	14.704	14.515	0.189	0.436	2.16	-0.256	3.07
1/29/2013	13:47:00	14.704	14.515	0.189	0.436	2.16	-0.256	3.07
1/29/2013	14:02:00	14.701	14.516	0.185	0.427	2.16	-0.247	2.96
1/29/2013	14:17:00	14.694	14.514	0.180	0.415	2.16	-0.235	2.82
1/29/2013	14:32:00	14.696	14.512	0.184	0.424	2.16	-0.244	2.93
1/29/2013	14:47:00	14.693	14.515	0.178	0.411	2.16	-0.231	2.77
1/29/2013	15:02:00	14.692	14.509	0.183	0.422	2.16	-0.242	2.91
1/29/2013	15:17:00	14.693	14.507	0.186	0.429	2.16	-0.249	2.99
1/29/2013	15:32:00	14.692	14.510	0.182	0.420	2.16	-0.240	2.88
1/29/2013	15:47:00	14.692	14.505	0.187	0.431	2.16	-0.251	3.02
1/29/2013	16:02:00	14.692	14.507	0.185	0.427	2.16	-0.247	2.96
1/29/2013	16:17:00	14.682	14.501	0.181	0.418	2.16	-0.238	2.85
1/29/2013	16:32:00	14.683	14.499	0.184	0.424	2.16	-0.244	2.93
1/29/2013	16:47:00	14.688	14.498	0.190	0.438	2.16	-0.258	3.10
1/29/2013	17:02:00	14.680	14.501	0.179	0.413	2.16	-0.233	2.80
1/29/2013	17:17:00	14.683	14.501	0.182	0.420	2.16	-0.240	2.88
1/29/2013	17:32:00	14.680	14.498	0.182	0.420	2.16	-0.240	2.88
1/29/2013	17:47:00	14.679	14.496	0.183	0.422	2.16	-0.242	2.91
1/29/2013	18:02:00	14.676	14.499	0.177	0.408	2.16	-0.228	2.74
1/29/2013	18:17:00	14.677	14.499	0.178	0.411	2.16	-0.231	2.77
1/29/2013	18:32:00	14.677	14.500	0.177	0.408	2.16	-0.228	2.74
1/29/2013	18:47:00	14.671	14.497	0.174	0.401	2.16	-0.221	2.66
1/29/2013	19:02:00	14.676	14.494	0.182	0.420	2.16	-0.240	2.88
1/29/2013	19:17:00	14.675	14.496	0.179	0.413	2.16	-0.233	2.80
1/29/2013	19:32:00	14.677	14.494	0.183	0.422	2.16	-0.242	2.91
1/29/2013	19:47:00	14.676	14.494	0.182	0.420	2.16	-0.240	2.88
1/29/2013	20:02:00	14.674	14.491	0.183	0.422	2.16	-0.242	2.91
1/29/2013	20:17:00	14.674	14.495	0.179	0.413	2.16	-0.233	2.80
1/29/2013	20:32:00	14.673	14.497	0.176	0.406	2.16	-0.226	2.71
1/29/2013	20:47:00	14.673	14.495	0.178	0.411	2.16	-0.231	2.77
1/29/2013	21:02:00	14.675	14.498	0.177	0.408	2.16	-0.228	2.74
1/29/2013	21:17:00	14.668	14.497	0.171	0.394	2.16	-0.214	2.57
1/29/2013	21:32:00	14.673	14.494	0.179	0.413	2.16	-0.233	2.80
1/29/2013	21:47:00	14.675	14.490	0.185	0.427	2.16	-0.247	2.96
1/29/2013	22:02:00	14.673	14.493	0.180	0.415	2.16	-0.235	2.82
1/29/2013	22:17:00	14.675	14.489	0.186	0.429	2.16	-0.249	2.99
1/29/2013	22:32:00	14.674	14.486	0.188	0.434	2.16	-0.254	3.04
1/29/2013	22:47:00	14.670	14.484	0.186	0.429	2.16	-0.249	2.99
1/29/2013	23:02:00	14.663	14.485	0.178	0.411	2.16	-0.231	2.77
1/29/2013	23:17:00	14.665	14.483	0.182	0.420	2.16	-0.240	2.88
1/29/2013	23:32:00	14.669	14.483	0.186	0.429	2.16	-0.249	2.99
1/29/2013	23:47:00	14.664	14.481	0.183	0.422	2.16	-0.242	2.91
1/30/2013	0:02:00	14.661	14.480	0.181	0.418	2.16	-0.238	2.85
1/30/2013	0:17:00	14.661	14.475	0.186	0.429	2.16	-0.249	2.99
1/30/2013	0:32:00	14.663	14.478	0.185	0.427	2.16	-0.247	2.96
1/30/2013	0:47:00	14.658	14.475	0.183	0.422	2.16	-0.242	2.91
1/30/2013	1:02:00	14.661	14.472	0.189	0.436	2.16	-0.256	3.07
1/30/2013	1:17:00	14.658	14.467	0.191	0.441	2.16	-0.261	3.13
1/30/2013	1:32:00	14.648	14.458	0.190	0.438	2.16	-0.258	3.10
1/30/2013	1:47:00	14.651	14.462	0.189	0.436	2.16	-0.256	3.07
1/30/2013	2:02:00	14.648	14.461	0.187	0.431	2.16	-0.251	3.02
1/30/2013	2:17:00	14.649	14.458	0.191	0.441	2.16	-0.261	3.13
1/30/2013	2:32:00	14.640	14.452	0.188	0.434	2.16	-0.254	3.04
1/30/2013	2:47:00	14.636	14.452	0.184	0.424	2.16	-0.244	2.93
1/30/2013	3:02:00	14.637	14.451	0.186	0.429	2.16	-0.249	2.99
1/30/2013	3:17:00	14.635	14.446	0.189	0.436	2.16	-0.256	3.07
1/30/2013	3:32:00	14.634	14.448	0.186	0.429	2.16	-0.249	2.99
1/30/2013	3:47:00	14.633	14.441	0.192	0.443	2.16	-0.263	3.16
1/30/2013	4:02:00	14.626	14.438	0.188	0.434	2.16	-0.254	3.04
1/30/2013	4:17:00	14.627	14.437	0.190	0.438	2.16	-0.258	3.10
1/30/2013	4:32:00	14.622	14.429	0.193	0.445	2.16	-0.265	3.18
1/30/2013	4:47:00	14.624	14.427	0.197	0.454	2.16	-0.274	3.29
1/30/2013	5:02:00	14.616	14.429	0.187	0.431	2.16	-0.251	3.02
1/30/2013	5:17:00	14.616	14.432	0.184	0.424	2.16	-0.244	2.93
1/30/2013	5:32:00	14.613	14.425	0.188	0.434	2.16	-0.254	3.04
1/30/2013	5:47:00	14.607	14.426	0.181	0.418	2.16	-0.238	2.85
1/30/2013	6:02:00	14.607	14.422	0.185	0.427	2.16	-0.247	2.96
1/30/2013	6:17:00	14.608	14.425	0.183	0.422	2.16	-0.242	2.91
1/30/2013	6:32:00	14.610	14.421	0.189	0.436	2.16	-0.256	3.07
1/30/2013	6:47:00	14.606	14.422	0.184	0.424	2.16	-0.244	2.93
1/30/2013	7:02:00	14.604	14.413	0.191	0.441	2.16	-0.261	3.13
1/30/2013	7:17:00	14.603	14.422	0.181	0.418	2.16	-0.238	2.85
1/30/2013	7:32:00	14.599	14.413	0.186	0.429	2.16	-0.249	2.99
1/30/2013	7:47:00	14.604	14.415	0.189	0.436	2.16	-0.256	3.07
1/30/2013	8:02:00	14.595	14.409	0.186	0.429	2.16	-0.249	2.99
1/30/2013	8:17:00	14.597	14.403	0.194	0.448	2.16	-0.268	3.21
1/30/2013	8:32:00	14.599	14.403	0.196	0.452	2.16	-0.272	3.27
1/30/2013	8:47:00	14.592	14.408	0.184	0.424	2.16	-0.244	2.93
1/30/2013	9:02:00	14.592	14.409	0.183	0.422	2.16	-0.242	2.91
1/30/2013	9:17:00	14.586	14.407	0.179	0.413	2.16	-0.233	2.80
1/30/2013	9:32:00	14.583	14.406	0.177	0.408	2.16	-0.228	2.74
1/30/2013	9:47:00	14.583	14.402	0.181	0.418	2.16	-0.238	2.85
1/30/2013	10:02:00	14.586	14.391	0.195	0.450	2.16	-0.270	3.24
1/30/2013	10:17:00	14.587	14.390	0.197	0.454	2.16	-0.274	3.29
1/30/2013	10:32:00	14.587	14.378	0.209	0.482	2.16	-0.302	3.63
1/30/2013	10:47:00	14.581	14.374	0.207	0.478	2.16	-0.298	3.57
1/30/2013	11:02:00	14.574	14.372	0.202	0.466	2.16	-0.286	3.43
1/30/2013	11:17:00	14.571	14.361	0.210	0.484	2.16	-0.304	3.65
1/30/2013	11:32:00	14.562	14.349	0.213	0.491	2.16	-0.311	3.74
1/30/2013	11:47:00	14.552	14.357	0.195	0.450	2.16	-0.270	3.24
1/30/2013	12:02:00	14.548	14.344	0.204	0.471	2.16	-0.291	3.49
1/30/2013	12:17:00	14.542	14.337	0.205	0.473	2.16	-0.293	3.52
1/30/2013	12:32:00	14.538	14.332	0.206	0.475	2.16	-0.295	3.54
1/30/2013	12:47:00	14.535	14.317	0.218	0.503	2.16	-0.323	3.88
1/30/2013	13:02:00	14.520	14.311	0.209	0.482	2.16	-0.302	3.63
1/30/2013	13:17:00	14.521	14.308	0.213	0.491	2.16	-0.311	3.74
1/30/2013	13:32:00	14.515	14.305	0.210	0.484	2.16	-0.304	3.65
1/30/2013	13:47:00	14.501	14.310	0.191	0.441	2.16	-0.261	3.13
1/30/2013	14:02:00	14.494	14.312	0.182	0.420	2.16	-0.240	2.88
1/30/2013	14:17:00	14.489	14.295	0.194	0.448	2.16	-0.268	3.21
1/30/2013	14:32:00	14.485	14.292	0.193	0.445	2.16	-0.265	3.18
1/30/2013	14:47:00	14.490	14.287	0.203	0.468	2.16	-0.288	3.46
1/30/2013	15:02:00	14.483	14.285	0.198	0.457	2.16	-0.277	3.32
1/30/2013	15:17:00	14.485	14.282	0.203	0.468	2.16	-0.288	3.46
1/30/2013	15:32:00	14.477	14.277	0.200	0.461	2.16	-0.281	3.38
1/30/2013	15:47:00	14.468	14.274	0.194	0.448	2.16	-0.268	3.21
1/30/2013	16:02:00	14.469	14.267	0.202	0.466	2.16	-0.286	3.43
1/30/2013	16:17:00	14.465	14.262	0.203	0.468	2.16	-0.288	3.46
1/30/2013	16:32:00	14.459	14.263	0.196	0.452	2.16	-0.272	3.27
1/30/2013	16:47:00	14.452	14.260	0.192	0.443	2.16	-0.263	3.16
1/30/2013	17:02:00	14.448	14.251	0.197	0.454	2.16	-0.274	3.29
1/30/2013	17:17:00	14.450	14.246	0.204	0.471	2.16	-0.291	3.49
1/30/2013	17:32:00	14.443	14.239	0.204	0.471	2.16	-0.291	3.49
1/30/2013	17:47:00	14.438	14.244	0.194	0.448	2.16	-0.268	3.21
1/30/2013	18:02:00	14.436	14.238	0.198	0.457	2.16	-0.277	3.32
1/30/2013	18:17:00	14.427	14.229	0.198	0.457	2.16	-0.277	3.32
1/30/2013	18:32:00	14.425	14.228	0.197	0.454	2.16	-0.274	3.29
1/30/2013	18:47:00	14.420	14.229	0.191	0.441	2.16	-0.261	3.13

1/30/2013	19:02:00	14.414	14.223	0.191	0.441	2.16	-0.261	3.13	
1/30/2013	19:17:00	14.412	14.223	0.189	0.436	2.16	-0.256	3.07	
1/30/2013	19:32:00	14.410	14.224	0.186	0.429	2.16	-0.249	2.99	
1/30/2013	19:47:00	14.404	14.214	0.190	0.438	2.16	-0.258	3.10	0.02
1/30/2013	20:02:00	14.407	14.212	0.195	0.450	2.16	-0.270	3.24	0.04
1/30/2013	20:17:00	14.406	14.210	0.196	0.452	2.16	-0.272	3.27	0.06
1/30/2013	20:32:00	14.405	14.225	0.180	0.415	2.16	-0.235	2.82	0.08
1/30/2013	20:47:00	14.399	14.226	0.173	0.399	2.16	-0.219	2.63	0.10
1/30/2013	21:02:00	14.395	14.239	0.156	0.360	2.16	-0.180	2.16	0.12
1/30/2013	21:17:00	14.384	14.255	0.129	0.298	2.16	-0.118	1.41	0.14
1/30/2013	21:32:00	14.392	14.255	0.137	0.316	2.16	-0.136	1.63	0.16
1/30/2013	21:47:00	14.426	14.245	0.181	0.418	2.16	-0.238	2.85	0.18
1/30/2013	22:02:00	14.440	14.254	0.186	0.429	2.16	-0.249	2.99	0.20
1/30/2013	22:17:00	14.510	14.268	0.242	0.558	2.16	-0.378	4.54	0.22
1/30/2013	22:32:00	14.518	14.265	0.253	0.584	2.16	-0.404	4.84	0.25
1/30/2013	22:47:00	14.516	14.262	0.254	0.586	2.16	-0.406	4.87	0.28
1/30/2013	23:02:00	14.505	14.268	0.237	0.547	2.16	-0.367	4.40	
1/30/2013	23:17:00	14.498	14.259	0.239	0.551	2.16	-0.371	4.46	
1/30/2013	23:32:00	14.504	14.258	0.246	0.568	2.16	-0.388	4.65	
1/30/2013	23:47:00	14.498	14.260	0.238	0.549	2.16	-0.369	4.43	
1/31/2013	0:02:00	14.516	14.255	0.261	0.602	2.16	-0.422	5.07	
1/31/2013	0:17:00	14.511	14.257	0.254	0.586	2.16	-0.406	4.87	
1/31/2013	0:32:00	14.498	14.261	0.237	0.547	2.16	-0.367	4.40	
1/31/2013	0:47:00	14.507	14.262	0.245	0.565	2.16	-0.385	4.62	
1/31/2013	1:02:00	14.496	14.264	0.232	0.535	2.16	-0.355	4.26	
1/31/2013	1:17:00	14.496	14.267	0.229	0.528	2.16	-0.348	4.18	
1/31/2013	1:32:00	14.502	14.263	0.239	0.551	2.16	-0.371	4.46	
1/31/2013	1:47:00	14.491	14.275	0.216	0.498	2.16	-0.318	3.82	
1/31/2013	2:02:00	14.491	14.276	0.215	0.496	2.16	-0.316	3.79	
1/31/2013	2:17:00	14.493	14.282	0.211	0.487	2.16	-0.307	3.68	
1/31/2013	2:32:00	14.494	14.276	0.218	0.503	2.16	-0.323	3.88	
1/31/2013	2:47:00	14.489	14.293	0.196	0.452	2.16	-0.272	3.27	
1/31/2013	3:02:00	14.490	14.287	0.203	0.468	2.16	-0.288	3.46	
1/31/2013	3:17:00	14.489	14.297	0.192	0.443	2.16	-0.263	3.16	
1/31/2013	3:32:00	14.500	14.304	0.196	0.452	2.16	-0.272	3.27	
1/31/2013	3:47:00	14.497	14.309	0.188	0.434	2.16	-0.254	3.04	
1/31/2013	4:02:00	14.503	14.315	0.188	0.434	2.16	-0.254	3.04	
1/31/2013	4:17:00	14.511	14.320	0.191	0.441	2.16	-0.261	3.13	
1/31/2013	4:32:00	14.516	14.324	0.192	0.443	2.16	-0.263	3.16	
1/31/2013	4:47:00	14.510	14.330	0.180	0.415	2.16	-0.235	2.82	
1/31/2013	5:02:00	14.521	14.339	0.182	0.420	2.16	-0.240	2.88	
1/31/2013	5:17:00	14.518	14.344	0.174	0.401	2.16	-0.221	2.66	
1/31/2013	5:32:00	14.529	14.351	0.178	0.411	2.16	-0.231	2.77	
1/31/2013	5:47:00	14.531	14.352	0.179	0.413	2.16	-0.233	2.80	
1/31/2013	6:02:00	14.535	14.361	0.174	0.401	2.16	-0.221	2.66	
1/31/2013	6:17:00	14.541	14.370	0.171	0.394	2.16	-0.214	2.57	
1/31/2013	6:32:00	14.546	14.377	0.169	0.390	2.16	-0.210	2.52	
1/31/2013	6:47:00	14.550	14.385	0.165	0.381	2.16	-0.201	2.41	
1/31/2013	7:02:00	14.554	14.390	0.164	0.378	2.16	-0.198	2.38	
1/31/2013	7:17:00	14.564	14.399	0.165	0.381	2.16	-0.201	2.41	
1/31/2013	7:32:00	14.569	14.403	0.166	0.383	2.16	-0.203	2.44	
1/31/2013	7:47:00	14.578	14.403	0.175	0.404	2.16	-0.224	2.68	
1/31/2013	8:02:00	14.583	14.408	0.175	0.404	2.16	-0.224	2.68	
1/31/2013	8:17:00	14.587	14.410	0.177	0.408	2.16	-0.228	2.74	
1/31/2013	8:32:00	14.586	14.419	0.167	0.385	2.16	-0.205	2.46	
1/31/2013	8:47:00	14.596	14.421	0.175	0.404	2.16	-0.224	2.68	
1/31/2013	9:02:00	14.598	14.420	0.178	0.411	2.16	-0.231	2.77	
1/31/2013	9:17:00	14.602	14.423	0.179	0.413	2.16	-0.233	2.80	
1/31/2013	9:32:00	14.606	14.428	0.178	0.411	2.16	-0.231	2.77	
1/31/2013	9:47:00	14.607	14.427	0.180	0.415	2.16	-0.235	2.82	
1/31/2013	10:02:00	14.612	14.426	0.186	0.429	2.16	-0.249	2.99	
1/31/2013	10:17:00	14.610	14.423	0.187	0.431	2.16	-0.251	3.02	
1/31/2013	10:32:00	14.611	14.417	0.194	0.448	2.16	-0.268	3.21	
1/31/2013	10:47:00	14.618	14.422	0.196	0.452	2.16	-0.272	3.27	
1/31/2013	11:02:00	14.608	14.423	0.185	0.427	2.16	-0.247	2.96	
1/31/2013	11:17:00	14.613	14.419	0.194	0.448	2.16	-0.268	3.21	
1/31/2013	11:32:00	14.611	14.420	0.191	0.441	2.16	-0.261	3.13	
1/31/2013	11:47:00	14.613	14.416	0.197	0.454	2.16	-0.274	3.29	
1/31/2013	12:02:00	14.605	14.417	0.188	0.434	2.16	-0.254	3.04	
1/31/2013	12:17:00	14.603	14.415	0.188	0.434	2.16	-0.254	3.04	
1/31/2013	12:32:00	14.608	14.416	0.192	0.443	2.16	-0.263	3.16	
1/31/2013	12:47:00	14.602	14.419	0.183	0.422	2.16	-0.242	2.91	
1/31/2013	13:02:00	14.606	14.419	0.187	0.431	2.16	-0.251	3.02	
1/31/2013	13:17:00	14.616	14.415	0.201	0.464	2.16	-0.284	3.40	
1/31/2013	13:32:00	14.599	14.422	0.177	0.408	2.16	-0.228	2.74	
1/31/2013	13:47:00	14.593	14.425	0.168	0.388	2.16	-0.208	2.49	
1/31/2013	14:02:00	14.592	14.426	0.166	0.383	2.16	-0.203	2.44	
1/31/2013	14:17:00	14.608	14.433	0.175	0.404	2.16	-0.224	2.68	
1/31/2013	14:32:00	14.596	14.439	0.157	0.362	2.16	-0.182	2.19	
1/31/2013	14:47:00	14.614	14.434	0.180	0.415	2.16	-0.235	2.82	
1/31/2013	15:02:00	14.609	14.439	0.170	0.392	2.16	-0.212	2.55	
1/31/2013	15:17:00	14.621	14.438	0.183	0.422	2.16	-0.242	2.91	
1/31/2013	15:32:00	14.615	14.446	0.169	0.390	2.16	-0.210	2.52	
1/31/2013	15:47:00	14.614	14.439	0.175	0.404	2.16	-0.224	2.68	
1/31/2013	16:02:00	14.622	14.444	0.178	0.411	2.16	-0.231	2.77	
1/31/2013	16:17:00	14.614	14.441	0.173	0.399	2.16	-0.219	2.63	
1/31/2013	16:32:00	14.637	14.442	0.195	0.450	2.16	-0.270	3.24	
1/31/2013	16:47:00	14.621	14.445	0.176	0.406	2.16	-0.226	2.71	
1/31/2013	17:02:00	14.632	14.453	0.179	0.413	2.16	-0.233	2.80	
1/31/2013	17:17:00	14.624	14.452	0.172	0.397	2.16	-0.217	2.60	
1/31/2013	17:32:00	14.623	14.459	0.164	0.378	2.16	-0.198	2.38	
1/31/2013	17:47:00	14.626	14.463	0.163	0.376	2.16	-0.196	2.35	
1/31/2013	18:02:00	14.628	14.467	0.161	0.371	2.16	-0.191	2.30	
1/31/2013	18:17:00	14.624	14.473	0.151	0.348	2.16	-0.168	2.02	
1/31/2013	18:32:00	14.636	14.468	0.168	0.388	2.16	-0.208	2.49	
1/31/2013	18:47:00	14.643	14.473	0.170	0.392	2.16	-0.212	2.55	
1/31/2013	19:02:00	14.646	14.473	0.173	0.399	2.16	-0.219	2.63	
1/31/2013	19:17:00	14.646	14.472	0.174	0.401	2.16	-0.221	2.66	
1/31/2013	19:32:00	14.650	14.475	0.175	0.404	2.16	-0.224	2.68	
1/31/2013	19:47:00	14.647	14.475	0.172	0.397	2.16	-0.217	2.60	
1/31/2013	20:02:00	14.650	14.481	0.169	0.390	2.16	-0.210	2.52	
1/31/2013	20:17:00	14.652	14.476	0.176	0.406	2.16	-0.226	2.71	
1/31/2013	20:32:00	14.650	14.485	0.165	0.381	2.16	-0.201	2.41	
1/31/2013	20:47:00	14.657	14.474	0.183	0.422	2.16	-0.242	2.91	
1/31/2013	21:02:00	14.655	14.488	0.167	0.385	2.16	-0.205	2.46	
1/31/2013	21:17:00	14.658	14.502	0.156	0.360	2.16	-0.180	2.16	
1/31/2013	21:32:00	14.654	14.476	0.178	0.411	2.16	-0.231	2.77	
1/31/2013	21:47:00	14.658	14.478	0.180	0.415	2.16	-0.235	2.82	
1/31/2013	22:02:00	14.656	14.487	0.169	0.390	2.16	-0.210	2.52	
1/31/2013	22:17:00	14.653	14.472	0.181	0.418	2.16	-0.238	2.85	
1/31/2013	22:32:00	14.662	14.496	0.166	0.383	2.16	-0.203	2.44	
1/31/2013	22:47:00	14.660	14.478	0.182	0.420	2.16	-0.240	2.88	
1/31/2013	23:02:00	14.662	14.495	0.167	0.385	2.16	-0.205	2.46	
1/31/2013	23:17:00	14.664	14.488	0.176	0.406	2.16	-0.226	2.71	
1/31/2013	23:32:00	14.659	14.494	0.165	0.381	2.16	-0.201	2.41	
1/31/2013	23:47:00	14.664	14.480	0.184	0.424	2.16	-0.244	2.93	
2/1/2013	0:02:00	14.660	14.487	0.173	0.399	2.16	-0.219	2.63	
2/1/2013	0:17:00	14.658	14.478	0.180	0.415	2.16	-0.235	2.82	
2/1/2013	0:32:00	14.655	14.476	0.179	0.413	2.16	-0.233	2.80	
2/1/2013	0:47:00	14.658	14.474	0.184	0.424	2.16	-0.244	2.93	
2/1/2013	1:02:00	14.659	14.481	0.178	0.411	2.16	-0.231	2.77	
2/1/2013	1:17:00	14.654	14.482	0.172	0.397	2.16	-0.217	2.60	
2/1/2013	1:32:00	14.655	14.474	0.181	0.418	2.16	-0.238	2.85	
2/1/2013	1:47:00	14.649	14.471	0.178	0.411	2.16	-0.231	2.77	
2/1/2013	2:02:00	14.654	14.460	0.194	0.448	2.16	-0.268	3.21	
2/1/2013	2:17:00	14.657	14.458	0.199	0.459	2.16	-0.279	3.35	
2/1/2013	2:32:00	14.648	14.451	0.197	0.454	2.16	-0.274	3.29	
2/1/2013	2:47:00	14.645	14.451	0.194	0.448	2.16	-0.268	3.21	
2/1/2013	3:02:00	14.640	14.446	0.194	0.448	2.16	-0.268	3.21	
2/1/2013	3:17:00	14.633	14.445	0.188	0.434	2.16	-0.254	3.04	
2/1/2013	3:32:00	14.632	14.449	0.183	0.422	2.16	-0.242	2.91	
2/1/2013	3:47:00	14.623	14.445	0.178	0.411	2.16	-0.231	2.77	
2/1/2013	4:02:00	14.626	14.436	0.190	0.438	2.16	-0.258	3.10	

2/1/2013	4:17:00	14.622	14.439	0.183	0.422	2.16	-0.242	2.91
2/1/2013	4:32:00	14.615	14.437	0.178	0.411	2.16	-0.231	2.77
2/1/2013	4:47:00	14.615	14.439	0.176	0.406	2.16	-0.226	2.71
2/1/2013	5:02:00	14.617	14.440	0.177	0.408	2.16	-0.228	2.74
2/1/2013	5:17:00	14.617	14.441	0.176	0.406	2.16	-0.226	2.71
2/1/2013	5:32:00	14.616	14.455	0.161	0.371	2.16	-0.191	2.30
2/1/2013	5:47:00	14.611	14.460	0.151	0.348	2.16	-0.168	2.02
2/1/2013	6:02:00	14.619	14.465	0.154	0.355	2.16	-0.175	2.10
2/1/2013	6:17:00	14.615	14.475	0.140	0.323	2.16	-0.143	1.72
2/1/2013	6:32:00	14.625	14.479	0.146	0.337	2.16	-0.157	1.88
2/1/2013	6:47:00	14.631	14.480	0.151	0.348	2.16	-0.168	2.02
2/1/2013	7:02:00	14.638	14.497	0.141	0.325	2.16	-0.145	1.74
2/1/2013	7:17:00	14.650	14.500	0.150	0.346	2.16	-0.166	1.99
2/1/2013	7:32:00	14.655	14.501	0.154	0.355	2.16	-0.175	2.10
2/1/2013	7:47:00	14.662	14.518	0.144	0.332	2.16	-0.152	1.83
2/1/2013	8:02:00	14.672	14.523	0.149	0.344	2.16	-0.164	1.96
2/1/2013	8:17:00	14.672	14.530	0.142	0.328	2.16	-0.148	1.77
2/1/2013	8:32:00	14.684	14.545	0.139	0.321	2.16	-0.141	1.69
2/1/2013	8:47:00	14.688	14.544	0.144	0.332	2.16	-0.152	1.83
2/1/2013	9:02:00	14.698	14.551	0.147	0.339	2.16	-0.159	1.91
2/1/2013	9:17:00	14.704	14.558	0.146	0.337	2.16	-0.157	1.88
2/1/2013	9:32:00	14.714	14.566	0.148	0.341	2.16	-0.161	1.94
2/1/2013	9:47:00	14.722	14.565	0.157	0.362	2.16	-0.182	2.19
2/1/2013	10:02:00	14.728	14.574	0.154	0.355	2.16	-0.175	2.10
2/1/2013	10:17:00	14.735	14.574	0.161	0.371	2.16	-0.191	2.30
2/1/2013	10:32:00	14.740	14.574	0.166	0.383	2.16	-0.203	2.44
2/1/2013	10:47:00	14.743	14.577	0.166	0.383	2.16	-0.203	2.44
2/1/2013	11:02:00	14.748	14.573	0.175	0.404	2.16	-0.224	2.68
2/1/2013	11:17:00	14.749	14.576	0.173	0.399	2.16	-0.219	2.63
2/1/2013	11:32:00	14.752	14.575	0.177	0.408	2.16	-0.228	2.74
2/1/2013	11:47:00	14.750	14.574	0.176	0.406	2.16	-0.226	2.71
2/1/2013	12:02:00	14.752	14.574	0.178	0.411	2.16	-0.231	2.77
2/1/2013	12:17:00	14.756	14.575	0.181	0.418	2.16	-0.238	2.85
2/1/2013	12:32:00	14.756	14.571	0.185	0.427	2.16	-0.247	2.96
2/1/2013	12:47:00	14.753	14.572	0.181	0.418	2.16	-0.238	2.85
2/1/2013	13:02:00	14.756	14.581	0.175	0.404	2.16	-0.224	2.68
2/1/2013	13:17:00	14.755	14.579	0.176	0.406	2.16	-0.226	2.71
2/1/2013	13:32:00	14.753	14.579	0.174	0.401	2.16	-0.221	2.66
2/1/2013	13:47:00	14.754	14.581	0.173	0.399	2.16	-0.219	2.63
2/1/2013	14:02:00	14.753	14.581	0.172	0.397	2.16	-0.217	2.60
2/1/2013	14:17:00	14.759	14.579	0.180	0.415	2.16	-0.235	2.82
2/1/2013	14:32:00	14.757	14.579	0.178	0.411	2.16	-0.231	2.77
2/1/2013	14:47:00	14.758	14.579	0.179	0.413	2.16	-0.233	2.80
2/1/2013	15:02:00	14.754	14.579	0.175	0.404	2.16	-0.224	2.68
2/1/2013	15:17:00	14.757	14.579	0.178	0.411	2.16	-0.231	2.77
2/1/2013	15:32:00	14.754	14.587	0.167	0.385	2.16	-0.205	2.46
2/1/2013	15:47:00	14.757	14.596	0.161	0.371	2.16	-0.191	2.30
2/1/2013	16:02:00	14.755	14.589	0.166	0.383	2.16	-0.203	2.44
2/1/2013	16:17:00	14.760	14.586	0.174	0.401	2.16	-0.221	2.66
2/1/2013	16:32:00	14.755	14.593	0.162	0.374	2.16	-0.194	2.32
2/1/2013	16:47:00	14.761	14.592	0.169	0.390	2.16	-0.210	2.52
2/1/2013	17:02:00	14.758	14.598	0.160	0.369	2.16	-0.189	2.27
2/1/2013	17:17:00	14.760	14.601	0.159	0.367	2.16	-0.187	2.24
2/1/2013	17:32:00	14.766	14.602	0.164	0.378	2.16	-0.198	2.38
2/1/2013	17:47:00	14.771	14.605	0.166	0.383	2.16	-0.203	2.44
2/1/2013	18:02:00	14.775	14.615	0.160	0.369	2.16	-0.189	2.27
2/1/2013	18:17:00	14.769	14.610	0.159	0.367	2.16	-0.187	2.24
2/1/2013	18:32:00	14.781	14.612	0.169	0.390	2.16	-0.210	2.52
2/1/2013	18:47:00	14.780	14.617	0.163	0.376	2.16	-0.196	2.35
2/1/2013	19:02:00	14.780	14.619	0.161	0.371	2.16	-0.191	2.30
2/1/2013	19:17:00	14.784	14.625	0.159	0.367	2.16	-0.187	2.24
2/1/2013	19:32:00	14.782	14.621	0.161	0.371	2.16	-0.191	2.30
2/1/2013	19:47:00	14.781	14.616	0.165	0.381	2.16	-0.201	2.41
2/1/2013	20:02:00	14.786	14.615	0.171	0.394	2.16	-0.214	2.57
2/1/2013	20:17:00	14.790	14.640	0.150	0.346	2.16	-0.166	1.99
2/1/2013	20:32:00	14.789	14.620	0.169	0.390	2.16	-0.210	2.52
2/1/2013	20:47:00	14.798	14.646	0.152	0.351	2.16	-0.171	2.05
2/1/2013	21:02:00	14.796	14.624	0.172	0.397	2.16	-0.217	2.60
2/1/2013	21:17:00	14.802	14.646	0.156	0.360	2.16	-0.180	2.16
2/1/2013	21:32:00	14.802	14.628	0.174	0.401	2.16	-0.221	2.66
2/1/2013	21:47:00	14.808	14.626	0.182	0.420	2.16	-0.240	2.88
2/1/2013	22:02:00	14.806	14.652	0.154	0.355	2.16	-0.175	2.10
2/1/2013	22:17:00	14.809	14.637	0.172	0.397	2.16	-0.217	2.60
2/1/2013	22:32:00	14.805	14.635	0.170	0.392	2.16	-0.212	2.55
2/1/2013	22:47:00	14.805	14.632	0.173	0.399	2.16	-0.219	2.63
2/1/2013	23:02:00	14.807	14.651	0.156	0.360	2.16	-0.180	2.16
2/1/2013	23:17:00	14.805	14.635	0.170	0.392	2.16	-0.212	2.55
2/1/2013	23:32:00	14.808	14.657	0.151	0.348	2.16	-0.168	2.02
2/1/2013	23:47:00	14.811	14.638	0.173	0.399	2.16	-0.219	2.63
2/2/2013	0:02:00	14.812	14.639	0.173	0.399	2.16	-0.219	2.63
2/2/2013	0:17:00	14.812	14.640	0.172	0.397	2.16	-0.217	2.60
2/2/2013	0:32:00	14.813	14.636	0.177	0.408	2.16	-0.228	2.74
2/2/2013	0:47:00	14.809	14.637	0.172	0.397	2.16	-0.217	2.60
2/2/2013	1:02:00	14.815	14.640	0.175	0.404	2.16	-0.224	2.68
2/2/2013	1:17:00	14.810	14.654	0.156	0.360	2.16	-0.180	2.16
2/2/2013	1:32:00	14.815	14.635	0.180	0.415	2.16	-0.235	2.82
2/2/2013	1:47:00	14.811	14.653	0.158	0.365	2.16	-0.185	2.21
2/2/2013	2:02:00	14.812	14.637	0.175	0.404	2.16	-0.224	2.68
2/2/2013	2:17:00	14.810	14.646	0.164	0.378	2.16	-0.198	2.38
2/2/2013	2:32:00	14.806	14.644	0.162	0.374	2.16	-0.194	2.32
2/2/2013	2:47:00	14.809	14.653	0.156	0.360	2.16	-0.180	2.16
2/2/2013	3:02:00	14.812	14.655	0.157	0.362	2.16	-0.182	2.19
2/2/2013	3:17:00	14.814	14.638	0.176	0.406	2.16	-0.226	2.71
2/2/2013	3:32:00	14.813	14.646	0.167	0.385	2.16	-0.205	2.46
2/2/2013	3:47:00	14.810	14.630	0.180	0.415	2.16	-0.235	2.82
2/2/2013	4:02:00	14.817	14.639	0.178	0.411	2.16	-0.231	2.77
2/2/2013	4:17:00	14.814	14.633	0.181	0.418	2.16	-0.238	2.85
2/2/2013	4:32:00	14.812	14.637	0.175	0.404	2.16	-0.224	2.68
2/2/2013	4:47:00	14.806	14.646	0.160	0.369	2.16	-0.189	2.27
2/2/2013	5:02:00	14.808	14.633	0.175	0.404	2.16	-0.224	2.68
2/2/2013	5:17:00	14.805	14.651	0.154	0.355	2.16	-0.175	2.10
2/2/2013	5:32:00	14.806	14.658	0.148	0.341	2.16	-0.161	1.94
2/2/2013	5:47:00	14.800	14.652	0.148	0.341	2.16	-0.161	1.94
2/2/2013	6:02:00	14.810	14.670	0.140	0.323	2.16	-0.143	1.72
2/2/2013	6:17:00	14.807	14.650	0.157	0.362	2.16	-0.182	2.19
2/2/2013	6:32:00	14.808	14.668	0.140	0.323	2.16	-0.143	1.72
2/2/2013	6:47:00	14.818	14.650	0.168	0.388	2.16	-0.208	2.49
2/2/2013	7:02:00	14.822	14.645	0.177	0.408	2.16	-0.228	2.74
2/2/2013	7:17:00	14.815	14.645	0.170	0.392	2.16	-0.212	2.55
2/2/2013	7:32:00	14.822	14.647	0.175	0.404	2.16	-0.224	2.68
2/2/2013	7:47:00	14.819	14.652	0.167	0.385	2.16	-0.205	2.46
2/2/2013	8:02:00	14.822	14.649	0.173	0.399	2.16	-0.219	2.63
2/2/2013	8:17:00	14.822	14.643	0.179	0.413	2.16	-0.233	2.80
2/2/2013	8:32:00	14.826	14.643	0.183	0.422	2.16	-0.242	2.91
2/2/2013	8:47:00	14.821	14.645	0.176	0.406	2.16	-0.226	2.71
2/2/2013	9:02:00	14.819	14.637	0.182	0.420	2.16	-0.240	2.88
2/2/2013	9:17:00	14.818	14.637	0.181	0.418	2.16	-0.238	2.85
2/2/2013	9:32:00	14.819	14.632	0.187	0.431	2.16	-0.251	3.02
2/2/2013	9:47:00	14.816	14.628	0.188	0.434	2.16	-0.254	3.04
2/2/2013	10:02:00	14.815	14.622	0.193	0.445	2.16	-0.265	3.18
2/2/2013	10:17:00	14.816	14.618	0.198	0.457	2.16	-0.277	3.32
2/2/2013	10:32:00	14.812	14.609	0.203	0.468	2.16	-0.288	3.46
2/2/2013	10:47:00	14.809	14.609	0.200	0.461	2.16	-0.281	3.38
2/2/2013	11:02:00	14.806	14.592	0.214	0.494	2.16	-0.314	3.76
2/2/2013	11:17:00	14.803	14.586	0.217	0.501	2.16	-0.321	3.85
2/2/2013	11:32:00	14.793	14.584	0.209	0.482	2.16	-0.302	3.63
2/2/2013	11:47:00	14.788	14.582	0.206	0.475	2.16	-0.295	3.54
2/2/2013	12:02:00	14.776	14.571	0.205	0.473	2.16	-0.293	3.52
2/2/2013	12:17:00	14.770	14.561	0.209	0.482	2.16	-0.302	3.63
2/2/2013	12:32:00	14.766	14.557	0.209	0.482	2.16	-0.302	3.63
2/2/2013	12:47:00	14.763	14.551	0.212	0.489	2.16	-0.309	3.71
2/2/2013	13:02:00	14.753	14.554	0.199	0.459	2.16	-0.279	3.35
2/2/2013	13:17:00	14.747	14.555	0.192	0.443	2.16	-0.263	3.16

2/2/2013	13:32:00	14.741	14.549	0.192	0.443	2.16	-0.263	3.16	
2/2/2013	13:47:00	14.740	14.542	0.198	0.457	2.16	-0.277	3.32	
2/2/2013	14:02:00	14.728	14.540	0.188	0.434	2.16	-0.254	3.04	
2/2/2013	14:17:00	14.731	14.533	0.198	0.457	2.16	-0.277	3.32	
2/2/2013	14:32:00	14.728	14.533	0.195	0.450	2.16	-0.270	3.24	
2/2/2013	14:47:00	14.722	14.523	0.199	0.459	2.16	-0.279	3.35	
2/2/2013	15:02:00	14.722	14.526	0.196	0.452	2.16	-0.272	3.27	
2/2/2013	15:17:00	14.716	14.529	0.187	0.431	2.16	-0.251	3.02	
2/2/2013	15:32:00	14.708	14.520	0.188	0.434	2.16	-0.254	3.04	
2/2/2013	15:47:00	14.704	14.518	0.186	0.429	2.16	-0.249	2.99	
2/2/2013	16:02:00	14.708	14.515	0.193	0.445	2.16	-0.265	3.18	
2/2/2013	16:17:00	14.698	14.509	0.189	0.436	2.16	-0.256	3.07	
2/2/2013	16:32:00	14.696	14.509	0.187	0.431	2.16	-0.251	3.02	
2/2/2013	16:47:00	14.694	14.512	0.182	0.420	2.16	-0.240	2.88	
2/2/2013	17:02:00	14.696	14.507	0.189	0.436	2.16	-0.256	3.07	
2/2/2013	17:17:00	14.688	14.501	0.187	0.431	2.16	-0.251	3.02	
2/2/2013	17:32:00	14.686	14.497	0.189	0.436	2.16	-0.256	3.07	
2/2/2013	17:47:00	14.684	14.498	0.186	0.429	2.16	-0.249	2.99	
2/2/2013	18:02:00	14.683	14.499	0.184	0.424	2.16	-0.244	2.93	
2/2/2013	18:17:00	14.681	14.496	0.185	0.427	2.16	-0.247	2.96	
2/2/2013	18:32:00	14.671	14.495	0.176	0.406	2.16	-0.226	2.71	
2/2/2013	18:47:00	14.676	14.499	0.177	0.408	2.16	-0.228	2.74	
2/2/2013	19:02:00	14.674	14.504	0.170	0.392	2.16	-0.212	2.55	
2/2/2013	19:17:00	14.678	14.507	0.171	0.394	2.16	-0.214	2.57	
2/2/2013	19:32:00	14.675	14.512	0.163	0.376	2.16	-0.196	2.35	
2/2/2013	19:47:00	14.674	14.517	0.157	0.362	2.16	-0.182	2.19	
2/2/2013	20:02:00	14.679	14.513	0.166	0.383	2.16	-0.203	2.44	
2/2/2013	20:17:00	14.684	14.507	0.177	0.408	2.16	-0.228	2.74	0.01
2/2/2013	20:32:00	14.692	14.498	0.194	0.448	2.16	-0.268	3.21	
2/2/2013	20:47:00	14.695	14.493	0.202	0.466	2.16	-0.286	3.43	
2/2/2013	21:02:00	14.695	14.503	0.192	0.443	2.16	-0.263	3.16	
2/2/2013	21:17:00	14.694	14.497	0.197	0.454	2.16	-0.274	3.29	
2/2/2013	21:32:00	14.687	14.502	0.185	0.427	2.16	-0.247	2.96	
2/2/2013	21:47:00	14.683	14.497	0.186	0.429	2.16	-0.249	2.99	
2/2/2013	22:02:00	14.682	14.496	0.186	0.429	2.16	-0.249	2.99	
2/2/2013	22:17:00	14.681	14.490	0.191	0.441	2.16	-0.261	3.13	
2/2/2013	22:32:00	14.685	14.477	0.208	0.480	2.16	-0.300	3.60	
2/2/2013	22:47:00	14.682	14.478	0.204	0.471	2.16	-0.291	3.49	
2/2/2013	23:02:00	14.678	14.475	0.203	0.468	2.16	-0.288	3.46	
2/2/2013	23:17:00	14.675	14.474	0.201	0.464	2.16	-0.284	3.40	
2/2/2013	23:32:00	14.663	14.471	0.192	0.443	2.16	-0.263	3.16	
2/2/2013	23:47:00	14.664	14.466	0.198	0.457	2.16	-0.277	3.32	
2/3/2013	0:02:00	14.657	14.471	0.186	0.429	2.16	-0.249	2.99	
2/3/2013	0:17:00	14.659	14.466	0.193	0.445	2.16	-0.265	3.18	
2/3/2013	0:32:00	14.657	14.459	0.198	0.457	2.16	-0.277	3.32	
2/3/2013	0:47:00	14.653	14.459	0.194	0.448	2.16	-0.268	3.21	
2/3/2013	1:02:00	14.647	14.454	0.193	0.445	2.16	-0.265	3.18	
2/3/2013	1:17:00	14.646	14.453	0.193	0.445	2.16	-0.265	3.18	
2/3/2013	1:32:00	14.644	14.452	0.192	0.443	2.16	-0.263	3.16	
2/3/2013	1:47:00	14.641	14.454	0.187	0.431	2.16	-0.251	3.02	
2/3/2013	2:02:00	14.639	14.448	0.191	0.441	2.16	-0.261	3.13	
2/3/2013	2:17:00	14.635	14.441	0.194	0.448	2.16	-0.268	3.21	
2/3/2013	2:32:00	14.633	14.439	0.194	0.448	2.16	-0.268	3.21	
2/3/2013	2:47:00	14.630	14.434	0.196	0.452	2.16	-0.272	3.27	
2/3/2013	3:02:00	14.629	14.431	0.198	0.457	2.16	-0.277	3.32	
2/3/2013	3:17:00	14.625	14.429	0.196	0.452	2.16	-0.272	3.27	
2/3/2013	3:32:00	14.620	14.428	0.192	0.443	2.16	-0.263	3.16	
2/3/2013	3:47:00	14.618	14.432	0.186	0.429	2.16	-0.249	2.99	
2/3/2013	4:02:00	14.614	14.427	0.187	0.431	2.16	-0.251	3.02	
2/3/2013	4:17:00	14.609	14.431	0.178	0.411	2.16	-0.231	2.77	
2/3/2013	4:32:00	14.608	14.430	0.178	0.411	2.16	-0.231	2.77	
2/3/2013	4:47:00	14.609	14.429	0.180	0.415	2.16	-0.235	2.82	
2/3/2013	5:02:00	14.616	14.436	0.180	0.415	2.16	-0.235	2.82	
2/3/2013	5:17:00	14.613	14.441	0.172	0.397	2.16	-0.217	2.60	
2/3/2013	5:32:00	14.610	14.440	0.170	0.392	2.16	-0.212	2.55	
2/3/2013	5:47:00	14.615	14.442	0.173	0.399	2.16	-0.219	2.63	
2/3/2013	6:02:00	14.618	14.444	0.174	0.401	2.16	-0.221	2.66	
2/3/2013	6:17:00	14.615	14.446	0.169	0.390	2.16	-0.210	2.52	
2/3/2013	6:32:00	14.617	14.449	0.168	0.388	2.16	-0.208	2.49	
2/3/2013	6:47:00	14.619	14.445	0.174	0.401	2.16	-0.221	2.66	
2/3/2013	7:02:00	14.624	14.439	0.185	0.427	2.16	-0.247	2.96	
2/3/2013	7:17:00	14.625	14.446	0.179	0.413	2.16	-0.233	2.80	
2/3/2013	7:32:00	14.628	14.452	0.176	0.406	2.16	-0.226	2.71	
2/3/2013	7:47:00	14.632	14.449	0.183	0.422	2.16	-0.242	2.91	
2/3/2013	8:02:00	14.629	14.449	0.180	0.415	2.16	-0.235	2.82	
2/3/2013	8:17:00	14.628	14.448	0.180	0.415	2.16	-0.235	2.82	
2/3/2013	8:32:00	14.629	14.455	0.174	0.401	2.16	-0.221	2.66	
2/3/2013	8:47:00	14.637	14.443	0.194	0.448	2.16	-0.268	3.21	
2/3/2013	9:02:00	14.631	14.449	0.182	0.420	2.16	-0.240	2.88	
2/3/2013	9:17:00	14.634	14.443	0.191	0.441	2.16	-0.261	3.13	
2/3/2013	9:32:00	14.635	14.447	0.188	0.434	2.16	-0.254	3.04	
2/3/2013	9:47:00	14.635	14.444	0.191	0.441	2.16	-0.261	3.13	
2/3/2013	10:02:00	14.629	14.438	0.191	0.441	2.16	-0.261	3.13	
2/3/2013	10:17:00	14.630	14.437	0.193	0.445	2.16	-0.265	3.18	
2/3/2013	10:32:00	14.627	14.433	0.194	0.448	2.16	-0.268	3.21	
2/3/2013	10:47:00	14.625	14.424	0.201	0.464	2.16	-0.284	3.40	
2/3/2013	11:02:00	14.625	14.420	0.205	0.473	2.16	-0.293	3.52	
2/3/2013	11:17:00	14.623	14.419	0.204	0.471	2.16	-0.291	3.49	
2/3/2013	11:32:00	14.616	14.416	0.200	0.461	2.16	-0.281	3.38	
2/3/2013	11:47:00	14.613	14.410	0.203	0.468	2.16	-0.288	3.46	
2/3/2013	12:02:00	14.606	14.407	0.199	0.459	2.16	-0.279	3.35	
2/3/2013	12:17:00	14.606	14.403	0.203	0.468	2.16	-0.288	3.46	
2/3/2013	12:32:00	14.596	14.401	0.195	0.450	2.16	-0.270	3.24	
2/3/2013	12:47:00	14.593	14.400	0.193	0.445	2.16	-0.265	3.18	
2/3/2013	13:02:00	14.589	14.397	0.192	0.443	2.16	-0.263	3.16	
2/3/2013	13:17:00	14.586	14.392	0.194	0.448	2.16	-0.268	3.21	
2/3/2013	13:32:00	14.583	14.392	0.191	0.441	2.16	-0.261	3.13	
2/3/2013	13:47:00	14.581	14.395	0.186	0.429	2.16	-0.249	2.99	
2/3/2013	14:02:00	14.580	14.394	0.186	0.429	2.16	-0.249	2.99	
2/3/2013	14:17:00	14.575	14.396	0.179	0.413	2.16	-0.233	2.80	
2/3/2013	14:32:00	14.571	14.400	0.171	0.394	2.16	-0.214	2.57	
2/3/2013	14:47:00	14.573	14.399	0.174	0.401	2.16	-0.221	2.66	
2/3/2013	15:02:00	14.575	14.396	0.179	0.413	2.16	-0.233	2.80	
2/3/2013	15:17:00	14.576	14.399	0.177	0.408	2.16	-0.228	2.74	
2/3/2013	15:32:00	14.575	14.399	0.176	0.406	2.16	-0.226	2.71	
2/3/2013	15:47:00	14.580	14.402	0.178	0.411	2.16	-0.231	2.77	
2/3/2013	16:02:00	14.577	14.403	0.174	0.401	2.16	-0.221	2.66	
2/3/2013	16:17:00	14.581	14.409	0.172	0.397	2.16	-0.217	2.60	
2/3/2013	16:32:00	14.580	14.414	0.166	0.383	2.16	-0.203	2.44	
2/3/2013	16:47:00	14.580	14.413	0.167	0.385	2.16	-0.205	2.46	
2/3/2013	17:02:00	14.582	14.416	0.166	0.383	2.16	-0.203	2.44	
2/3/2013	17:17:00	14.588	14.415	0.173	0.399	2.16	-0.219	2.63	
2/3/2013	17:32:00	14.590	14.422	0.168	0.388	2.16	-0.208	2.49	
2/3/2013	17:47:00	14.594	14.421	0.173	0.399	2.16	-0.219	2.63	
2/3/2013	18:02:00	14.592	14.425	0.167	0.385	2.16	-0.205	2.46	
2/3/2013	18:17:00	14.591	14.434	0.157	0.362	2.16	-0.182	2.19	
2/3/2013	18:32:00	14.598	14.447	0.151	0.348	2.16	-0.168	2.02	
2/3/2013	18:47:00	14.602	14.442	0.160	0.369	2.16	-0.189	2.27	
2/3/2013	19:02:00	14.607	14.447	0.160	0.369	2.16	-0.189	2.27	
2/3/2013	19:17:00	14.613	14.450	0.163	0.376	2.16	-0.196	2.35	
2/3/2013	19:32:00	14.615	14.446	0.169	0.390	2.16	-0.210	2.52	
2/3/2013	19:47:00	14.619	14.448	0.171	0.394	2.16	-0.214	2.57	
2/3/2013	20:02:00	14.618	14.451	0.167	0.385	2.16	-0.205	2.46	
2/3/2013	20:17:00	14.626	14.463	0.163	0.376	2.16	-0.196	2.35	
2/3/2013	20:32:00	14.624	14.457	0.167	0.385	2.16	-0.205	2.46	
2/3/2013	20:47:00	14.626	14.461	0.165	0.381	2.16	-0.201	2.41	
2/3/2013	21:02:00	14.629	14.461	0.168	0.388	2.16	-0.208	2.49	
2/3/2013	21:17:00	14.636	14.463	0.173	0.399	2.16	-0.219	2.63	
2/3/2013	21:32:00	14.637	14.462	0.175	0.404	2.16	-0.224	2.68	
2/3/2013	21:47:00	14.637	14.462	0.175	0.404	2.16	-0.224	2.68	
2/3/2013	22:02:00	14.640	14.460	0.180	0.415	2.16	-0.235	2.82	
2/3/2013	22:17:00	14.642	14.465	0.177	0.408	2.16	-0.228	2.74	
2/3/2013	22:32:00	14.640	14.468	0.172	0.397	2.16	-0.217	2.60	

2/3/2013	22:47:00	14.641	14.467	0.174	0.401	2.16	-0.221	2.66
2/3/2013	23:02:00	14.641	14.469	0.172	0.397	2.16	-0.217	2.60
2/3/2013	23:17:00	14.640	14.469	0.171	0.394	2.16	-0.214	2.57
2/3/2013	23:32:00	14.640	14.472	0.168	0.388	2.16	-0.208	2.49
2/3/2013	23:47:00	14.640	14.467	0.173	0.399	2.16	-0.219	2.63
2/4/2013	0:02:00	14.644	14.474	0.170	0.392	2.16	-0.212	2.55
2/4/2013	0:17:00	14.645	14.466	0.179	0.413	2.16	-0.233	2.80
2/4/2013	0:32:00	14.642	14.465	0.177	0.408	2.16	-0.228	2.74
2/4/2013	0:47:00	14.646	14.477	0.169	0.390	2.16	-0.210	2.52
2/4/2013	1:02:00	14.639	14.479	0.160	0.369	2.16	-0.189	2.27
2/4/2013	1:17:00	14.645	14.470	0.175	0.404	2.16	-0.224	2.68
2/4/2013	1:32:00	14.639	14.478	0.161	0.371	2.16	-0.191	2.30
2/4/2013	1:47:00	14.639	14.478	0.161	0.371	2.16	-0.191	2.30
2/4/2013	2:02:00	14.644	14.478	0.166	0.383	2.16	-0.203	2.44
2/4/2013	2:17:00	14.644	14.478	0.166	0.383	2.16	-0.203	2.44
2/4/2013	2:32:00	14.645	14.473	0.172	0.397	2.16	-0.217	2.60
2/4/2013	2:47:00	14.642	14.476	0.166	0.383	2.16	-0.203	2.44
2/4/2013	3:02:00	14.644	14.492	0.152	0.351	2.16	-0.171	2.05
2/4/2013	3:17:00	14.647	14.486	0.161	0.371	2.16	-0.191	2.30
2/4/2013	3:32:00	14.647	14.488	0.159	0.367	2.16	-0.187	2.24
2/4/2013	3:47:00	14.650	14.497	0.153	0.353	2.16	-0.173	2.08
2/4/2013	4:02:00	14.650	14.492	0.158	0.365	2.16	-0.185	2.21
2/4/2013	4:17:00	14.659	14.497	0.162	0.374	2.16	-0.194	2.32
2/4/2013	4:32:00	14.653	14.490	0.163	0.376	2.16	-0.196	2.35
2/4/2013	4:47:00	14.656	14.490	0.166	0.383	2.16	-0.203	2.44
2/4/2013	5:02:00	14.656	14.499	0.157	0.362	2.16	-0.182	2.19
2/4/2013	5:17:00	14.663	14.500	0.163	0.376	2.16	-0.196	2.35
2/4/2013	5:32:00	14.662	14.501	0.161	0.371	2.16	-0.191	2.30
2/4/2013	5:47:00	14.664	14.495	0.169	0.390	2.16	-0.210	2.52
2/4/2013	6:02:00	14.667	14.509	0.158	0.365	2.16	-0.185	2.21
2/4/2013	6:17:00	14.664	14.501	0.163	0.376	2.16	-0.196	2.35
2/4/2013	6:32:00	14.664	14.513	0.151	0.348	2.16	-0.168	2.02
2/4/2013	6:47:00	14.669	14.528	0.141	0.325	2.16	-0.145	1.74
2/4/2013	7:02:00	14.670	14.511	0.159	0.367	2.16	-0.187	2.24
2/4/2013	7:17:00	14.674	14.511	0.163	0.376	2.16	-0.196	2.35
2/4/2013	7:32:00	14.676	14.534	0.142	0.328	2.16	-0.148	1.77
2/4/2013	7:47:00	14.680	14.527	0.153	0.353	2.16	-0.173	2.08
2/4/2013	8:02:00	14.683	14.531	0.152	0.351	2.16	-0.171	2.05
2/4/2013	8:17:00	14.688	14.525	0.163	0.376	2.16	-0.196	2.35
2/4/2013	8:32:00	14.692	14.527	0.165	0.381	2.16	-0.201	2.41
2/4/2013	8:47:00	14.692	14.539	0.153	0.353	2.16	-0.173	2.08
2/4/2013	9:02:00	14.693	14.538	0.155	0.358	2.16	-0.178	2.13
2/4/2013	9:17:00	14.703	14.531	0.172	0.397	2.16	-0.217	2.60
2/4/2013	9:32:00	14.706	14.529	0.177	0.408	2.16	-0.228	2.74
2/4/2013	9:47:00	14.708	14.530	0.178	0.411	2.16	-0.231	2.77
2/4/2013	10:02:00	14.704	14.527	0.177	0.408	2.16	-0.228	2.74
2/4/2013	10:17:00	14.712	14.520	0.192	0.443	2.16	-0.263	3.16
2/4/2013	10:32:00	14.700	14.528	0.172	0.397	2.16	-0.217	2.60
2/4/2013	10:47:00	14.706	14.518	0.188	0.434	2.16	-0.254	3.04
2/4/2013	11:02:00	14.699	14.506	0.193	0.445	2.16	-0.265	3.18
2/4/2013	11:17:00	14.702	14.501	0.201	0.464	2.16	-0.284	3.40
2/4/2013	11:32:00	14.698	14.507	0.191	0.441	2.16	-0.261	3.13
2/4/2013	11:47:00	14.700	14.509	0.191	0.441	2.16	-0.261	3.13
2/4/2013	12:02:00	14.693	14.505	0.188	0.434	2.16	-0.254	3.04
2/4/2013	12:17:00	14.685	14.496	0.189	0.436	2.16	-0.256	3.07
2/4/2013	12:32:00	14.688	14.492	0.196	0.452	2.16	-0.272	3.27
2/4/2013	12:47:00	14.687	14.489	0.198	0.457	2.16	-0.277	3.32
2/4/2013	13:02:00	14.686	14.489	0.197	0.454	2.16	-0.274	3.29
2/4/2013	13:17:00	14.682	14.488	0.194	0.448	2.16	-0.268	3.21
2/4/2013	13:32:00	14.672	14.486	0.186	0.429	2.16	-0.249	2.99
2/4/2013	13:47:00	14.666	14.477	0.189	0.436	2.16	-0.256	3.07
2/4/2013	14:02:00	14.666	14.477	0.189	0.436	2.16	-0.256	3.07
2/4/2013	14:17:00	14.666	14.479	0.187	0.431	2.16	-0.251	3.02
2/4/2013	14:32:00	14.661	14.476	0.185	0.427	2.16	-0.247	2.96
2/4/2013	14:47:00	14.659	14.479	0.180	0.415	2.16	-0.235	2.82
2/4/2013	15:02:00	14.657	14.475	0.182	0.420	2.16	-0.240	2.88
2/4/2013	15:17:00	14.658	14.475	0.183	0.422	2.16	-0.242	2.91
2/4/2013	15:32:00	14.654	14.473	0.181	0.418	2.16	-0.238	2.85
2/4/2013	15:47:00	14.653	14.482	0.171	0.394	2.16	-0.214	2.57
2/4/2013	16:02:00	14.652	14.475	0.177	0.408	2.16	-0.228	2.74
2/4/2013	16:17:00	14.653	14.477	0.176	0.406	2.16	-0.226	2.71
2/4/2013	16:32:00	14.652	14.470	0.182	0.420	2.16	-0.240	2.88
2/4/2013	16:47:00	14.652	14.470	0.182	0.420	2.16	-0.240	2.88
2/4/2013	17:02:00	14.653	14.473	0.180	0.415	2.16	-0.235	2.82
2/4/2013	17:17:00	14.651	14.475	0.176	0.406	2.16	-0.226	2.71
2/4/2013	17:32:00	14.648	14.473	0.175	0.404	2.16	-0.224	2.68
2/4/2013	17:47:00	14.649	14.484	0.165	0.381	2.16	-0.201	2.41
2/4/2013	18:02:00	14.649	14.476	0.173	0.399	2.16	-0.219	2.63
2/4/2013	18:17:00	14.656	14.475	0.181	0.418	2.16	-0.238	2.85
2/4/2013	18:32:00	14.655	14.479	0.176	0.406	2.16	-0.226	2.71
2/4/2013	18:47:00	14.658	14.477	0.181	0.418	2.16	-0.238	2.85
2/4/2013	19:02:00	14.653	14.476	0.177	0.408	2.16	-0.228	2.74
2/4/2013	19:17:00	14.652	14.469	0.183	0.422	2.16	-0.242	2.91
2/4/2013	19:32:00	14.658	14.474	0.184	0.424	2.16	-0.244	2.93
2/4/2013	19:47:00	14.653	14.477	0.176	0.406	2.16	-0.226	2.71
2/4/2013	20:02:00	14.655	14.475	0.180	0.415	2.16	-0.235	2.82
2/4/2013	20:17:00	14.652	14.480	0.172	0.397	2.16	-0.217	2.60
2/4/2013	20:32:00	14.651	14.479	0.172	0.397	2.16	-0.217	2.60
2/4/2013	20:47:00	14.649	14.479	0.170	0.392	2.16	-0.212	2.55
2/4/2013	21:02:00	14.649	14.473	0.176	0.406	2.16	-0.226	2.71
2/4/2013	21:17:00	14.651	14.468	0.183	0.422	2.16	-0.242	2.91
2/4/2013	21:32:00	14.655	14.483	0.172	0.397	2.16	-0.217	2.60
2/4/2013	21:47:00	14.654	14.466	0.188	0.434	2.16	-0.254	3.04
2/4/2013	22:02:00	14.652	14.465	0.187	0.431	2.16	-0.251	3.02
2/4/2013	22:17:00	14.657	14.455	0.202	0.466	2.16	-0.286	3.43
2/4/2013	22:32:00	14.650	14.457	0.193	0.445	2.16	-0.265	3.18
2/4/2013	22:47:00	14.652	14.456	0.196	0.452	2.16	-0.272	3.27
2/4/2013	23:02:00	14.650	14.461	0.189	0.436	2.16	-0.256	3.07
2/4/2013	23:17:00	14.649	14.450	0.199	0.459	2.16	-0.279	3.35
2/4/2013	23:32:00	14.648	14.455	0.193	0.445	2.16	-0.265	3.18
2/4/2013	23:47:00	14.651	14.456	0.195	0.450	2.16	-0.270	3.24
2/5/2013	0:02:00	14.647	14.451	0.196	0.452	2.16	-0.272	3.27
2/5/2013	0:17:00	14.645	14.451	0.194	0.448	2.16	-0.268	3.21
2/5/2013	0:32:00	14.641	14.451	0.190	0.438	2.16	-0.258	3.10
2/5/2013	0:47:00	14.633	14.445	0.188	0.434	2.16	-0.254	3.04
2/5/2013	1:02:00	14.632	14.442	0.190	0.438	2.16	-0.258	3.10
2/5/2013	1:17:00	14.629	14.445	0.184	0.424	2.16	-0.244	2.93
2/5/2013	1:32:00	14.627	14.444	0.183	0.422	2.16	-0.242	2.91
2/5/2013	1:47:00	14.626	14.439	0.187	0.431	2.16	-0.251	3.02
2/5/2013	2:02:00	14.623	14.438	0.185	0.427	2.16	-0.247	2.96
2/5/2013	2:17:00	14.623	14.434	0.189	0.436	2.16	-0.256	3.07
2/5/2013	2:32:00	14.622	14.435	0.187	0.431	2.16	-0.251	3.02
2/5/2013	2:47:00	14.619	14.431	0.188	0.434	2.16	-0.254	3.04
2/5/2013	3:02:00	14.611	14.429	0.182	0.420	2.16	-0.240	2.88
2/5/2013	3:17:00	14.612	14.436	0.176	0.406	2.16	-0.226	2.71
2/5/2013	3:32:00	14.608	14.434	0.174	0.401	2.16	-0.221	2.66
2/5/2013	3:47:00	14.606	14.430	0.176	0.406	2.16	-0.226	2.71
2/5/2013	4:02:00	14.604	14.430	0.174	0.401	2.16	-0.221	2.66
2/5/2013	4:17:00	14.610	14.432	0.178	0.411	2.16	-0.231	2.77
2/5/2013	4:32:00	14.608	14.436	0.172	0.397	2.16	-0.217	2.60
2/5/2013	4:47:00	14.604	14.437	0.167	0.385	2.16	-0.205	2.46
2/5/2013	5:02:00	14.605	14.434	0.171	0.394	2.16	-0.214	2.57
2/5/2013	5:17:00	14.604	14.442	0.162	0.374	2.16	-0.194	2.32
2/5/2013	5:32:00	14.609	14.441	0.168	0.388	2.16	-0.208	2.49
2/5/2013	5:47:00	14.609	14.447	0.162	0.374	2.16	-0.194	2.32
2/5/2013	6:02:00	14.609	14.450	0.159	0.367	2.16	-0.187	2.24
2/5/2013	6:17:00	14.613	14.449	0.164	0.378	2.16	-0.198	2.38
2/5/2013	6:32:00	14.618	14.445	0.173	0.399	2.16	-0.219	2.63
2/5/2013	6:47:00	14.623	14.454	0.169	0.390	2.16	-0.210	2.52
2/5/2013	7:02:00	14.619	14.455	0.164	0.378	2.16	-0.198	2.38
2/5/2013	7:17:00	14.620	14.454	0.166	0.383	2.16	-0.203	2.44
2/5/2013	7:32:00	14.621	14.462	0.159	0.367	2.16	-0.187	2.24
2/5/2013	7:47:00	14.620	14.466	0.154	0.355	2.16	-0.175	2.10

2/5/2013	8:02:00	14.627	14.461	0.166	0.383	2.16	-0.203	2.44
2/5/2013	8:17:00	14.624	14.458	0.166	0.383	2.16	-0.203	2.44
2/5/2013	8:32:00	14.635	14.457	0.178	0.411	2.16	-0.231	2.77
2/5/2013	8:47:00	14.643	14.454	0.189	0.436	2.16	-0.256	3.07
2/5/2013	9:02:00	14.637	14.445	0.192	0.443	2.16	-0.263	3.16
2/5/2013	9:17:00	14.639	14.450	0.189	0.436	2.16	-0.256	3.07
2/5/2013	9:32:00	14.631	14.447	0.184	0.424	2.16	-0.244	2.93
2/5/2013	9:47:00	14.636	14.450	0.186	0.429	2.16	-0.249	2.99
2/5/2013	10:02:00	14.625	14.446	0.179	0.413	2.16	-0.233	2.80
2/5/2013	10:17:00	14.627	14.443	0.184	0.424	2.16	-0.244	2.93
2/5/2013	10:32:00	14.623	14.437	0.186	0.429	2.16	-0.249	2.99
2/5/2013	10:47:00	14.627	14.432	0.195	0.450	2.16	-0.270	3.24
2/5/2013	11:02:00	14.627	14.442	0.185	0.427	2.16	-0.247	2.96
2/5/2013	11:17:00	14.625	14.438	0.187	0.431	2.16	-0.251	3.02
2/5/2013	11:32:00	14.619	14.432	0.187	0.431	2.16	-0.251	3.02
2/5/2013	11:47:00	14.618	14.430	0.188	0.434	2.16	-0.254	3.04
2/5/2013	12:02:00	14.620	14.423	0.197	0.454	2.16	-0.274	3.29
2/5/2013	12:17:00	14.617	14.424	0.193	0.445	2.16	-0.265	3.18
2/5/2013	12:32:00	14.613	14.416	0.197	0.454	2.16	-0.274	3.29
2/5/2013	12:47:00	14.607	14.414	0.193	0.445	2.16	-0.265	3.18
2/5/2013	13:02:00	14.605	14.408	0.197	0.454	2.16	-0.274	3.29
2/5/2013	13:17:00	14.601	14.412	0.189	0.436	2.16	-0.256	3.07
2/5/2013	13:32:00	14.599	14.409	0.190	0.438	2.16	-0.258	3.10
2/5/2013	13:47:00	14.597	14.405	0.192	0.443	2.16	-0.263	3.16
2/5/2013	14:02:00	14.594	14.410	0.184	0.424	2.16	-0.244	2.93
2/5/2013	14:17:00	14.583	14.401	0.182	0.420	2.16	-0.240	2.88
2/5/2013	14:32:00	14.587	14.411	0.176	0.406	2.16	-0.226	2.71
2/5/2013	14:47:00	14.585	14.409	0.176	0.406	2.16	-0.226	2.71
2/5/2013	15:02:00	14.597	14.407	0.190	0.438	2.16	-0.258	3.10
2/5/2013	15:17:00	14.589	14.404	0.185	0.427	2.16	-0.247	2.96
2/5/2013	15:32:00	14.573	14.411	0.162	0.374	2.16	-0.194	2.32
2/5/2013	15:47:00	14.585	14.407	0.178	0.411	2.16	-0.231	2.77
2/5/2013	16:02:00	14.589	14.407	0.182	0.420	2.16	-0.240	2.88
2/5/2013	16:17:00	14.584	14.409	0.175	0.404	2.16	-0.224	2.68
2/5/2013	16:32:00	14.587	14.409	0.178	0.411	2.16	-0.231	2.77
2/5/2013	16:47:00	14.593	14.408	0.185	0.427	2.16	-0.247	2.96
2/5/2013	17:02:00	14.583	14.410	0.173	0.399	2.16	-0.219	2.63
2/5/2013	17:17:00	14.579	14.414	0.165	0.381	2.16	-0.201	2.41
2/5/2013	17:32:00	14.585	14.414	0.171	0.394	2.16	-0.214	2.57
2/5/2013	17:47:00	14.584	14.418	0.166	0.383	2.16	-0.203	2.44
2/5/2013	18:02:00	14.592	14.424	0.168	0.388	2.16	-0.208	2.49
2/5/2013	18:17:00	14.587	14.427	0.160	0.369	2.16	-0.189	2.27
2/5/2013	18:32:00	14.592	14.424	0.168	0.388	2.16	-0.208	2.49
2/5/2013	18:47:00	14.588	14.425	0.163	0.376	2.16	-0.196	2.35
2/5/2013	19:02:00	14.599	14.431	0.168	0.388	2.16	-0.208	2.49
2/5/2013	19:17:00	14.601	14.432	0.169	0.390	2.16	-0.210	2.52
2/5/2013	19:32:00	14.601	14.432	0.169	0.390	2.16	-0.210	2.52
2/5/2013	19:47:00	14.605	14.434	0.171	0.394	2.16	-0.214	2.57
2/5/2013	20:02:00	14.603	14.434	0.169	0.390	2.16	-0.210	2.52
2/5/2013	20:17:00	14.613	14.436	0.177	0.408	2.16	-0.228	2.74
2/5/2013	20:32:00	14.612	14.436	0.176	0.406	2.16	-0.226	2.71
2/5/2013	20:47:00	14.613	14.445	0.168	0.388	2.16	-0.208	2.49
2/5/2013	21:02:00	14.610	14.446	0.164	0.378	2.16	-0.198	2.38
2/5/2013	21:17:00	14.618	14.430	0.188	0.434	2.16	-0.254	3.04
2/5/2013	21:32:00	14.621	14.446	0.175	0.404	2.16	-0.224	2.68
2/5/2013	21:47:00	14.617	14.451	0.166	0.383	2.16	-0.203	2.44
2/5/2013	22:02:00	14.622	14.448	0.174	0.401	2.16	-0.221	2.66
2/5/2013	22:17:00	14.623	14.449	0.174	0.401	2.16	-0.221	2.66
2/5/2013	22:32:00	14.624	14.451	0.173	0.399	2.16	-0.219	2.63
2/5/2013	22:47:00	14.619	14.448	0.171	0.394	2.16	-0.214	2.57
2/5/2013	23:02:00	14.625	14.450	0.175	0.404	2.16	-0.224	2.68
2/5/2013	23:17:00	14.625	14.456	0.169	0.390	2.16	-0.210	2.52
2/5/2013	23:32:00	14.629	14.452	0.177	0.408	2.16	-0.228	2.74
2/5/2013	23:47:00	14.622	14.448	0.174	0.401	2.16	-0.221	2.66
2/6/2013	0:02:00	14.624	14.451	0.173	0.399	2.16	-0.219	2.63
2/6/2013	0:17:00	14.629	14.451	0.178	0.411	2.16	-0.231	2.77
2/6/2013	0:32:00	14.624	14.452	0.172	0.397	2.16	-0.217	2.60
2/6/2013	0:47:00	14.622	14.454	0.168	0.388	2.16	-0.208	2.49
2/6/2013	1:02:00	14.624	14.457	0.167	0.385	2.16	-0.205	2.46
2/6/2013	1:17:00	14.626	14.455	0.171	0.394	2.16	-0.214	2.57
2/6/2013	1:32:00	14.625	14.456	0.169	0.390	2.16	-0.210	2.52
2/6/2013	1:47:00	14.631	14.461	0.170	0.392	2.16	-0.212	2.55
2/6/2013	2:02:00	14.629	14.459	0.170	0.392	2.16	-0.212	2.55
2/6/2013	2:17:00	14.627	14.460	0.167	0.385	2.16	-0.205	2.46
2/6/2013	2:32:00	14.630	14.463	0.167	0.385	2.16	-0.205	2.46
2/6/2013	2:47:00	14.628	14.466	0.162	0.374	2.16	-0.194	2.32
2/6/2013	3:02:00	14.624	14.467	0.157	0.362	2.16	-0.182	2.19
2/6/2013	3:17:00	14.630	14.473	0.157	0.362	2.16	-0.182	2.19
2/6/2013	3:32:00	14.629	14.471	0.158	0.365	2.16	-0.185	2.21
2/6/2013	3:47:00	14.635	14.475	0.160	0.369	2.16	-0.189	2.27
2/6/2013	4:02:00	14.640	14.476	0.164	0.378	2.16	-0.198	2.38
2/6/2013	4:17:00	14.638	14.482	0.156	0.360	2.16	-0.180	2.16
2/6/2013	4:32:00	14.645	14.486	0.159	0.367	2.16	-0.187	2.24
2/6/2013	4:47:00	14.644	14.485	0.159	0.367	2.16	-0.187	2.24
2/6/2013	5:02:00	14.648	14.486	0.162	0.374	2.16	-0.194	2.32
2/6/2013	5:17:00	14.646	14.493	0.153	0.353	2.16	-0.173	2.08
2/6/2013	5:32:00	14.652	14.496	0.156	0.360	2.16	-0.180	2.16
2/6/2013	5:47:00	14.660	14.498	0.162	0.374	2.16	-0.194	2.32
2/6/2013	6:02:00	14.655	14.504	0.151	0.348	2.16	-0.168	2.02
2/6/2013	6:17:00	14.658	14.506	0.152	0.351	2.16	-0.171	2.05
2/6/2013	6:32:00	14.662	14.514	0.148	0.341	2.16	-0.161	1.94
2/6/2013	6:47:00	14.664	14.502	0.162	0.374	2.16	-0.194	2.32
2/6/2013	7:02:00	14.671	14.525	0.146	0.337	2.16	-0.157	1.88
2/6/2013	7:17:00	14.675	14.519	0.156	0.360	2.16	-0.180	2.16
2/6/2013	7:32:00	14.678	14.520	0.158	0.365	2.16	-0.185	2.21
2/6/2013	7:47:00	14.680	14.522	0.158	0.365	2.16	-0.185	2.21
2/6/2013	8:02:00	14.689	14.526	0.163	0.376	2.16	-0.196	2.35
2/6/2013	8:17:00	14.690	14.524	0.166	0.383	2.16	-0.203	2.44
2/6/2013	8:32:00	14.691	14.531	0.160	0.369	2.16	-0.189	2.27
2/6/2013	8:47:00	14.696	14.531	0.165	0.381	2.16	-0.201	2.41
2/6/2013	9:02:00	14.701	14.540	0.161	0.371	2.16	-0.191	2.30
2/6/2013	9:17:00	14.700	14.532	0.168	0.388	2.16	-0.208	2.49
2/6/2013	9:32:00	14.704	14.536	0.168	0.388	2.16	-0.208	2.49
2/6/2013	9:47:00	14.706	14.535	0.171	0.394	2.16	-0.214	2.57
2/6/2013	10:02:00	14.707	14.537	0.170	0.392	2.16	-0.212	2.55
2/6/2013	10:17:00	14.703	14.538	0.165	0.381	2.16	-0.201	2.41
2/6/2013	10:32:00	14.710	14.540	0.170	0.392	2.16	-0.212	2.55
2/6/2013	10:47:00	14.713	14.532	0.181	0.418	2.16	-0.238	2.85
2/6/2013	11:02:00	14.711	14.531	0.180	0.415	2.16	-0.235	2.82
2/6/2013	11:17:00	14.714	14.531	0.183	0.422	2.16	-0.242	2.91
2/6/2013	11:32:00	14.711	14.532	0.179	0.413	2.16	-0.233	2.80
2/6/2013	11:47:00	14.712	14.524	0.188	0.434	2.16	-0.254	3.04
2/6/2013	12:02:00	14.712	14.527	0.185	0.427	2.16	-0.247	2.96
2/6/2013	12:17:00	14.711	14.522	0.189	0.436	2.16	-0.256	3.07
2/6/2013	12:32:00	14.710	14.520	0.190	0.438	2.16	-0.258	3.10
2/6/2013	12:47:00	14.701	14.516	0.185	0.427	2.16	-0.247	2.96
2/6/2013	13:02:00	14.703	14.518	0.185	0.427	2.16	-0.247	2.96
2/6/2013	13:17:00	14.703	14.514	0.189	0.436	2.16	-0.256	3.07
2/6/2013	13:32:00	14.697	14.516	0.181	0.418	2.16	-0.238	2.85
2/6/2013	13:47:00	14.692	14.514	0.178	0.411	2.16	-0.231	2.77
2/6/2013	14:02:00	14.695	14.515	0.180	0.415	2.16	-0.235	2.82
2/6/2013	14:17:00	14.691	14.512	0.179	0.413	2.16	-0.233	2.80
2/6/2013	14:32:00	14.701	14.514	0.187	0.431	2.16	-0.251	3.02
2/6/2013	14:47:00	14.684	14.518	0.166	0.383	2.16	-0.203	2.44
2/6/2013	15:02:00	14.697	14.521	0.176	0.406	2.16	-0.226	2.71
2/6/2013	15:17:00	14.678	14.515	0.163	0.376	2.16	-0.196	2.35
2/6/2013	15:32:00	14.675	14.517	0.158	0.365	2.16	-0.185	2.21
2/6/2013	15:47:00	14.677	14.515	0.162	0.374	2.16	-0.194	2.32
2/6/2013	16:02:00	14.689	14.519	0.170	0.392	2.16	-0.212	2.55
2/6/2013	16:17:00	14.681	14.525	0.156	0.360	2.16	-0.180	2.16
2/6/2013	16:32:00	14.699	14.521	0.178	0.411	2.16	-0.231	2.77
2/6/2013	16:47:00	14.694	14.523	0.171	0.394	2.16	-0.214	2.57
2/6/2013	17:02:00	14.697	14.524	0.173	0.399	2.16	-0.219	2.63

2/6/2013	17:17:00	14.692	14.528	0.164	0.378	2.16	-0.198	2.38	
2/6/2013	17:32:00	14.704	14.529	0.175	0.404	2.16	-0.224	2.68	
2/6/2013	17:47:00	14.703	14.533	0.170	0.392	2.16	-0.212	2.55	
2/6/2013	18:02:00	14.713	14.534	0.179	0.413	2.16	-0.233	2.80	
2/6/2013	18:17:00	14.706	14.534	0.172	0.397	2.16	-0.217	2.60	
2/6/2013	18:32:00	14.708	14.539	0.169	0.390	2.16	-0.210	2.52	
2/6/2013	18:47:00	14.703	14.541	0.162	0.374	2.16	-0.194	2.32	
2/6/2013	19:02:00	14.708	14.543	0.165	0.381	2.16	-0.201	2.41	
2/6/2013	19:17:00	14.712	14.545	0.167	0.385	2.16	-0.205	2.46	
2/6/2013	19:32:00	14.714	14.551	0.163	0.376	2.16	-0.196	2.35	
2/6/2013	19:47:00	14.714	14.550	0.164	0.378	2.16	-0.198	2.38	
2/6/2013	20:02:00	14.712	14.548	0.164	0.378	2.16	-0.198	2.38	
2/6/2013	20:17:00	14.718	14.546	0.172	0.397	2.16	-0.217	2.60	
2/6/2013	20:32:00	14.723	14.548	0.175	0.404	2.16	-0.224	2.68	
2/6/2013	20:47:00	14.717	14.551	0.166	0.383	2.16	-0.203	2.44	
2/6/2013	21:02:00	14.723	14.553	0.170	0.392	2.16	-0.212	2.55	
2/6/2013	21:17:00	14.720	14.560	0.160	0.369	2.16	-0.189	2.27	
2/6/2013	21:32:00	14.721	14.573	0.148	0.341	2.16	-0.161	1.94	
2/6/2013	21:47:00	14.723	14.566	0.157	0.362	2.16	-0.182	2.19	
2/6/2013	22:02:00	14.725	14.564	0.161	0.371	2.16	-0.191	2.30	
2/6/2013	22:17:00	14.729	14.558	0.171	0.394	2.16	-0.214	2.57	
2/6/2013	22:32:00	14.733	14.559	0.174	0.401	2.16	-0.221	2.66	
2/6/2013	22:47:00	14.737	14.566	0.171	0.394	2.16	-0.214	2.57	
2/6/2013	23:02:00	14.735	14.567	0.168	0.388	2.16	-0.208	2.49	
2/6/2013	23:17:00	14.732	14.559	0.173	0.399	2.16	-0.219	2.63	
2/6/2013	23:32:00	14.732	14.558	0.174	0.401	2.16	-0.221	2.66	
2/6/2013	23:47:00	14.737	14.563	0.174	0.401	2.16	-0.221	2.66	
2/7/2013	0:02:00	14.736	14.561	0.175	0.404	2.16	-0.224	2.68	
2/7/2013	0:17:00	14.737	14.561	0.176	0.406	2.16	-0.226	2.71	
2/7/2013	0:32:00	14.731	14.562	0.169	0.390	2.16	-0.210	2.52	
2/7/2013	0:47:00	14.732	14.564	0.168	0.388	2.16	-0.208	2.49	
2/7/2013	1:02:00	14.729	14.563	0.166	0.383	2.16	-0.203	2.44	
2/7/2013	1:17:00	14.731	14.565	0.166	0.383	2.16	-0.203	2.44	
2/7/2013	1:32:00	14.730	14.560	0.170	0.392	2.16	-0.212	2.55	
2/7/2013	1:47:00	14.733	14.560	0.173	0.399	2.16	-0.219	2.63	
2/7/2013	2:02:00	14.740	14.564	0.176	0.406	2.16	-0.226	2.71	
2/7/2013	2:17:00	14.731	14.562	0.169	0.390	2.16	-0.210	2.52	
2/7/2013	2:32:00	14.732	14.562	0.170	0.392	2.16	-0.212	2.55	
2/7/2013	2:47:00	14.734	14.565	0.169	0.390	2.16	-0.210	2.52	
2/7/2013	3:02:00	14.733	14.563	0.170	0.392	2.16	-0.212	2.55	
2/7/2013	3:17:00	14.738	14.560	0.178	0.411	2.16	-0.231	2.77	
2/7/2013	3:32:00	14.732	14.573	0.159	0.367	2.16	-0.187	2.24	
2/7/2013	3:47:00	14.731	14.572	0.159	0.367	2.16	-0.187	2.24	
2/7/2013	4:02:00	14.730	14.571	0.159	0.367	2.16	-0.187	2.24	
2/7/2013	4:17:00	14.728	14.574	0.154	0.355	2.16	-0.175	2.10	
2/7/2013	4:32:00	14.734	14.578	0.156	0.360	2.16	-0.180	2.16	
2/7/2013	4:47:00	14.738	14.578	0.160	0.369	2.16	-0.189	2.27	
2/7/2013	5:02:00	14.740	14.577	0.163	0.376	2.16	-0.196	2.35	
2/7/2013	5:17:00	14.738	14.573	0.165	0.381	2.16	-0.201	2.41	
2/7/2013	5:32:00	14.744	14.583	0.161	0.371	2.16	-0.191	2.30	
2/7/2013	5:47:00	14.742	14.575	0.167	0.385	2.16	-0.205	2.46	
2/7/2013	6:02:00	14.745	14.580	0.165	0.381	2.16	-0.201	2.41	
2/7/2013	6:17:00	14.748	14.583	0.165	0.381	2.16	-0.201	2.41	
2/7/2013	6:32:00	14.745	14.585	0.160	0.369	2.16	-0.189	2.27	
2/7/2013	6:47:00	14.747	14.578	0.169	0.390	2.16	-0.210	2.52	
2/7/2013	7:02:00	14.746	14.586	0.160	0.369	2.16	-0.189	2.27	
2/7/2013	7:17:00	14.748	14.587	0.161	0.371	2.16	-0.191	2.30	
2/7/2013	7:32:00	14.747	14.581	0.166	0.383	2.16	-0.203	2.44	
2/7/2013	7:47:00	14.752	14.579	0.173	0.399	2.16	-0.219	2.63	
2/7/2013	8:02:00	14.747	14.580	0.167	0.385	2.16	-0.205	2.46	
2/7/2013	8:17:00	14.754	14.583	0.171	0.394	2.16	-0.214	2.57	
2/7/2013	8:32:00	14.763	14.584	0.179	0.413	2.16	-0.233	2.80	
2/7/2013	8:47:00	14.757	14.575	0.182	0.420	2.16	-0.240	2.88	
2/7/2013	9:02:00	14.756	14.569	0.187	0.431	2.16	-0.251	3.02	
2/7/2013	9:17:00	14.752	14.573	0.179	0.413	2.16	-0.233	2.80	
2/7/2013	9:32:00	14.753	14.567	0.186	0.429	2.16	-0.249	2.99	
2/7/2013	9:47:00	14.751	14.570	0.181	0.418	2.16	-0.238	2.85	
2/7/2013	10:02:00	14.747	14.566	0.181	0.418	2.16	-0.238	2.85	
2/7/2013	10:17:00	14.739	14.563	0.176	0.406	2.16	-0.226	2.71	
2/7/2013	10:32:00	14.747	14.565	0.182	0.420	2.16	-0.240	2.88	
2/7/2013	10:47:00	14.739	14.566	0.173	0.399	2.16	-0.219	2.63	
2/7/2013	11:02:00	14.738	14.562	0.176	0.406	2.16	-0.226	2.71	
2/7/2013	11:17:00	14.737	14.554	0.183	0.422	2.16	-0.242	2.91	
2/7/2013	11:32:00	14.738	14.552	0.186	0.429	2.16	-0.249	2.99	
2/7/2013	11:47:00	14.736	14.538	0.198	0.457	2.16	-0.277	3.32	
2/7/2013	12:02:00	14.736	14.528	0.208	0.480	2.16	-0.300	3.60	
2/7/2013	12:17:00	14.734	14.533	0.201	0.464	2.16	-0.284	3.40	
2/7/2013	12:32:00	14.730	14.533	0.197	0.454	2.16	-0.274	3.29	
2/7/2013	12:47:00	14.720	14.537	0.183	0.422	2.16	-0.242	2.91	
2/7/2013	13:02:00	14.713	14.533	0.180	0.415	2.16	-0.235	2.82	
2/7/2013	13:17:00	14.704	14.532	0.172	0.397	2.16	-0.217	2.60	
2/7/2013	13:32:00	14.708	14.526	0.182	0.420	2.16	-0.240	2.88	
2/7/2013	13:47:00	14.704	14.525	0.179	0.413	2.16	-0.233	2.80	
2/7/2013	14:02:00	14.703	14.528	0.175	0.404	2.16	-0.224	2.68	
2/7/2013	14:17:00	14.704	14.521	0.183	0.422	2.16	-0.242	2.91	
2/7/2013	14:32:00	14.699	14.516	0.183	0.422	2.16	-0.242	2.91	
2/7/2013	14:47:00	14.694	14.510	0.184	0.424	2.16	-0.244	2.93	
2/7/2013	15:02:00	14.695	14.515	0.180	0.415	2.16	-0.235	2.82	
2/7/2013	15:17:00	14.693	14.516	0.177	0.408	2.16	-0.228	2.74	
2/7/2013	15:32:00	14.693	14.503	0.190	0.438	2.16	-0.258	3.10	
2/7/2013	15:47:00	14.687	14.499	0.188	0.434	2.16	-0.254	3.04	
2/7/2013	16:02:00	14.691	14.494	0.197	0.454	2.16	-0.274	3.29	
2/7/2013	16:17:00	14.685	14.493	0.192	0.443	2.16	-0.263	3.16	
2/7/2013	16:32:00	14.676	14.489	0.187	0.431	2.16	-0.251	3.02	
2/7/2013	16:47:00	14.677	14.483	0.194	0.448	2.16	-0.268	3.21	
2/7/2013	17:02:00	14.670	14.484	0.186	0.429	2.16	-0.249	2.99	
2/7/2013	17:17:00	14.667	14.485	0.182	0.420	2.16	-0.240	2.88	
2/7/2013	17:32:00	14.663	14.483	0.180	0.415	2.16	-0.235	2.82	
2/7/2013	17:47:00	14.663	14.483	0.180	0.415	2.16	-0.235	2.82	
2/7/2013	18:02:00	14.660	14.478	0.182	0.420	2.16	-0.240	2.88	
2/7/2013	18:17:00	14.661	14.477	0.184	0.424	2.16	-0.244	2.93	0.01
2/7/2013	18:32:00	14.655	14.476	0.179	0.413	2.16	-0.233	2.80	
2/7/2013	18:47:00	14.661	14.468	0.193	0.445	2.16	-0.265	3.18	
2/7/2013	19:02:00	14.662	14.470	0.192	0.443	2.16	-0.263	3.16	0.02
2/7/2013	19:17:00	14.658	14.464	0.194	0.448	2.16	-0.268	3.21	0.03
2/7/2013	19:32:00	14.652	14.455	0.197	0.454	2.16	-0.274	3.29	
2/7/2013	19:47:00	14.651	14.443	0.208	0.480	2.16	-0.300	3.60	
2/7/2013	20:02:00	14.649	14.459	0.190	0.438	2.16	-0.258	3.10	0.04
2/7/2013	20:17:00	14.642	14.457	0.185	0.427	2.16	-0.247	2.96	0.05
2/7/2013	20:32:00	14.644	14.450	0.194	0.448	2.16	-0.268	3.21	0.06
2/7/2013	20:47:00	14.638	14.452	0.186	0.429	2.16	-0.249	2.99	0.07
2/7/2013	21:02:00	14.631	14.446	0.185	0.427	2.16	-0.247	2.96	
2/7/2013	21:17:00	14.636	14.442	0.194	0.448	2.16	-0.268	3.21	0.08
2/7/2013	21:32:00	14.635	14.442	0.193	0.445	2.16	-0.265	3.18	0.09
2/7/2013	21:47:00	14.634	14.437	0.197	0.454	2.16	-0.274	3.29	0.10
2/7/2013	22:02:00	14.636	14.428	0.208	0.480	2.16	-0.300	3.60	0.12
2/7/2013	22:17:00	14.633	14.420	0.213	0.491	2.16	-0.311	3.74	0.16
2/7/2013	22:32:00	14.631	14.418	0.213	0.491	2.16	-0.311	3.74	0.18
2/7/2013	22:47:00	14.640	14.416	0.224	0.517	2.16	-0.337	4.04	0.22
2/7/2013	23:02:00	14.646	14.417	0.229	0.528	2.16	-0.348	4.18	0.25
2/7/2013	23:17:00	14.661	14.405	0.256	0.591	2.16	-0.411	4.93	0.26
2/7/2013	23:32:00	14.675	14.403	0.272	0.628	2.16	-0.448	5.37	0.28
2/7/2013	23:47:00	14.683	14.401	0.282	0.651	2.16	-0.471	5.65	0.31
2/8/2013	0:02:00	14.690	14.399	0.291	0.671	2.16	-0.491	5.90	0.01
2/8/2013	0:17:00	14.682	14.398	0.284	0.655	2.16	-0.475	5.70	0.02
2/8/2013	0:32:00	14.670	14.403	0.267	0.616	2.16	-0.436	5.23	
2/8/2013	0:47:00	14.670	14.395	0.275	0.634	2.16	-0.454	5.45	0.03
2/8/2013	1:02:00	14.669	14.380	0.289	0.667	2.16	-0.487	5.84	
2/8/2013	1:17:00	14.683	14.379	0.304	0.701	2.16	-0.521	6.26	
2/8/2013	1:32:00	14.683	14.395	0.288	0.664	2.16	-0.484	5.81	
2/8/2013	1:47:00	14.675	14.369	0.306	0.706	2.16	-0.526	6.31	
2/8/2013	2:02:00	14.664	14.385	0.279	0.644	2.16	-0.464	5.56	
2/8/2013	2:17:00	14.652	14.379	0.273	0.630	2.16	-0.450	5.40	

2/8/2013	2:32:00	14.643	14.373	0.270	0.623	2.16	-0.443	5.31	
2/8/2013	2:47:00	14.642	14.379	0.263	0.607	2.16	-0.427	5.12	
2/8/2013	3:02:00	14.633	14.390	0.243	0.561	2.16	-0.381	4.57	
2/8/2013	3:17:00	14.629	14.398	0.231	0.533	2.16	-0.353	4.24	
2/8/2013	3:32:00	14.626	14.391	0.235	0.542	2.16	-0.362	4.35	
2/8/2013	3:47:00	14.621	14.394	0.227	0.524	2.16	-0.344	4.12	
2/8/2013	4:02:00	14.617	14.388	0.229	0.528	2.16	-0.348	4.18	
2/8/2013	4:17:00	14.613	14.382	0.231	0.533	2.16	-0.353	4.24	
2/8/2013	4:32:00	14.611	14.397	0.214	0.494	2.16	-0.314	3.76	
2/8/2013	4:47:00	14.616	14.404	0.212	0.489	2.16	-0.309	3.71	
2/8/2013	5:02:00	14.613	14.400	0.213	0.491	2.16	-0.311	3.74	
2/8/2013	5:17:00	14.614	14.393	0.221	0.510	2.16	-0.330	3.96	
2/8/2013	5:32:00	14.618	14.402	0.216	0.498	2.16	-0.318	3.82	0.04
2/8/2013	5:47:00	14.611	14.400	0.211	0.487	2.16	-0.307	3.68	
2/8/2013	6:02:00	14.611	14.409	0.202	0.466	2.16	-0.286	3.43	
2/8/2013	6:17:00	14.607	14.403	0.204	0.471	2.16	-0.291	3.49	
2/8/2013	6:32:00	14.610	14.407	0.203	0.468	2.16	-0.288	3.46	
2/8/2013	6:47:00	14.608	14.411	0.197	0.454	2.16	-0.274	3.29	
2/8/2013	7:02:00	14.617	14.412	0.205	0.473	2.16	-0.293	3.52	
2/8/2013	7:17:00	14.613	14.416	0.197	0.454	2.16	-0.274	3.29	
2/8/2013	7:32:00	14.613	14.419	0.194	0.448	2.16	-0.268	3.21	
2/8/2013	7:47:00	14.612	14.425	0.187	0.431	2.16	-0.251	3.02	
2/8/2013	8:02:00	14.617	14.417	0.200	0.461	2.16	-0.281	3.38	
2/8/2013	8:17:00	14.614	14.413	0.201	0.464	2.16	-0.284	3.40	
2/8/2013	8:32:00	14.615	14.429	0.186	0.429	2.16	-0.249	2.99	
2/8/2013	8:47:00	14.624	14.428	0.196	0.452	2.16	-0.272	3.27	
2/8/2013	9:02:00	14.625	14.427	0.198	0.457	2.16	-0.277	3.32	
2/8/2013	9:17:00	14.626	14.433	0.193	0.445	2.16	-0.265	3.18	
2/8/2013	9:32:00	14.622	14.431	0.191	0.441	2.16	-0.261	3.13	
2/8/2013	9:47:00	14.623	14.432	0.191	0.441	2.16	-0.261	3.13	
2/8/2013	10:02:00	14.628	14.428	0.200	0.461	2.16	-0.281	3.38	
2/8/2013	10:17:00	14.629	14.422	0.207	0.478	2.16	-0.298	3.57	
2/8/2013	10:32:00	14.634	14.417	0.217	0.501	2.16	-0.321	3.85	
2/8/2013	10:47:00	14.629	14.419	0.210	0.484	2.16	-0.304	3.65	
2/8/2013	11:02:00	14.632	14.415	0.217	0.501	2.16	-0.321	3.85	
2/8/2013	11:17:00	14.621	14.416	0.205	0.473	2.16	-0.293	3.52	
2/8/2013	11:32:00	14.618	14.411	0.207	0.478	2.16	-0.298	3.57	
2/8/2013	11:47:00	14.616	14.405	0.211	0.487	2.16	-0.307	3.68	
2/8/2013	12:02:00	14.610	14.403	0.207	0.478	2.16	-0.298	3.57	
2/8/2013	12:17:00	14.613	14.401	0.212	0.489	2.16	-0.309	3.71	
2/8/2013	12:32:00	14.609	14.396	0.213	0.491	2.16	-0.311	3.74	
2/8/2013	12:47:00	14.603	14.397	0.206	0.475	2.16	-0.295	3.54	
2/8/2013	13:02:00	14.609	14.395	0.214	0.494	2.16	-0.314	3.76	
2/8/2013	13:17:00	14.591	14.390	0.201	0.464	2.16	-0.284	3.40	
2/8/2013	13:32:00	14.609	14.384	0.225	0.519	2.16	-0.339	4.07	
2/8/2013	13:47:00	14.573	14.388	0.185	0.427	2.16	-0.247	2.96	
2/8/2013	14:02:00	14.596	14.388	0.208	0.480	2.16	-0.300	3.60	
2/8/2013	14:17:00	14.584	14.386	0.198	0.457	2.16	-0.277	3.32	
2/8/2013	14:32:00	14.583	14.388	0.195	0.450	2.16	-0.270	3.24	
2/8/2013	14:47:00	14.582	14.387	0.195	0.450	2.16	-0.270	3.24	
2/8/2013	15:02:00	14.575	14.390	0.185	0.427	2.16	-0.247	2.96	
2/8/2013	15:17:00	14.584	14.389	0.195	0.450	2.16	-0.270	3.24	
2/8/2013	15:32:00	14.580	14.392	0.188	0.434	2.16	-0.254	3.04	
2/8/2013	15:47:00	14.579	14.397	0.182	0.420	2.16	-0.240	2.88	
2/8/2013	16:02:00	14.581	14.399	0.182	0.420	2.16	-0.240	2.88	
2/8/2013	16:17:00	14.583	14.403	0.180	0.415	2.16	-0.235	2.82	
2/8/2013	16:32:00	14.587	14.411	0.176	0.406	2.16	-0.226	2.71	
2/8/2013	16:47:00	14.584	14.413	0.171	0.394	2.16	-0.214	2.57	
2/8/2013	17:02:00	14.584	14.420	0.164	0.378	2.16	-0.198	2.38	
2/8/2013	17:17:00	14.592	14.418	0.174	0.401	2.16	-0.221	2.66	
2/8/2013	17:32:00	14.610	14.418	0.192	0.443	2.16	-0.263	3.16	
2/8/2013	17:47:00	14.612	14.431	0.181	0.418	2.16	-0.238	2.85	
2/8/2013	18:02:00	14.609	14.432	0.177	0.408	2.16	-0.228	2.74	
2/8/2013	18:17:00	14.602	14.435	0.167	0.385	2.16	-0.205	2.46	
2/8/2013	18:32:00	14.608	14.435	0.173	0.399	2.16	-0.219	2.63	
2/8/2013	18:47:00	14.619	14.439	0.180	0.415	2.16	-0.235	2.82	
2/8/2013	19:02:00	14.615	14.441	0.174	0.401	2.16	-0.221	2.66	
2/8/2013	19:17:00	14.626	14.449	0.177	0.408	2.16	-0.228	2.74	
2/8/2013	19:32:00	14.624	14.450	0.174	0.401	2.16	-0.221	2.66	
2/8/2013	19:47:00	14.625	14.456	0.169	0.390	2.16	-0.210	2.52	
2/8/2013	20:02:00	14.625	14.456	0.169	0.390	2.16	-0.210	2.52	
2/8/2013	20:17:00	14.631	14.467	0.164	0.378	2.16	-0.198	2.38	
2/8/2013	20:32:00	14.638	14.469	0.169	0.390	2.16	-0.210	2.52	
2/8/2013	20:47:00	14.643	14.473	0.170	0.392	2.16	-0.212	2.55	
2/8/2013	21:02:00	14.644	14.483	0.161	0.371	2.16	-0.191	2.30	
2/8/2013	21:17:00	14.649	14.495	0.154	0.355	2.16	-0.175	2.10	
2/8/2013	21:32:00	14.653	14.508	0.145	0.335	2.16	-0.155	1.85	
2/8/2013	21:47:00	14.662	14.500	0.162	0.374	2.16	-0.194	2.32	
2/8/2013	22:02:00	14.663	14.499	0.164	0.378	2.16	-0.198	2.38	
2/8/2013	22:17:00	14.671	14.505	0.166	0.383	2.16	-0.203	2.44	
2/8/2013	22:32:00	14.677	14.503	0.174	0.401	2.16	-0.221	2.66	
2/8/2013	22:47:00	14.684	14.506	0.178	0.411	2.16	-0.231	2.77	
2/8/2013	23:02:00	14.684	14.504	0.180	0.415	2.16	-0.235	2.82	
2/8/2013	23:17:00	14.685	14.510	0.175	0.404	2.16	-0.224	2.68	
2/8/2013	23:32:00	14.687	14.515	0.172	0.397	2.16	-0.217	2.60	
2/8/2013	23:47:00	14.690	14.514	0.176	0.406	2.16	-0.226	2.71	
2/9/2013	0:02:00	14.686	14.511	0.175	0.404	2.16	-0.224	2.68	
2/9/2013	0:17:00	14.689	14.513	0.176	0.406	2.16	-0.226	2.71	
2/9/2013	0:32:00	14.699	14.513	0.186	0.429	2.16	-0.249	2.99	
2/9/2013	0:47:00	14.699	14.512	0.187	0.431	2.16	-0.251	3.02	
2/9/2013	1:02:00	14.699	14.506	0.193	0.445	2.16	-0.265	3.18	
2/9/2013	1:17:00	14.690	14.514	0.176	0.406	2.16	-0.226	2.71	
2/9/2013	1:32:00	14.690	14.521	0.169	0.390	2.16	-0.210	2.52	
2/9/2013	1:47:00	14.690	14.519	0.171	0.394	2.16	-0.214	2.57	
2/9/2013	2:02:00	14.693	14.524	0.169	0.390	2.16	-0.210	2.52	
2/9/2013	2:17:00	14.696	14.523	0.173	0.399	2.16	-0.219	2.63	
2/9/2013	2:32:00	14.696	14.527	0.169	0.390	2.16	-0.210	2.52	
2/9/2013	2:47:00	14.699	14.529	0.170	0.392	2.16	-0.212	2.55	
2/9/2013	3:02:00	14.702	14.533	0.169	0.390	2.16	-0.210	2.52	
2/9/2013	3:17:00	14.700	14.531	0.169	0.390	2.16	-0.210	2.52	
2/9/2013	3:32:00	14.702	14.536	0.166	0.383	2.16	-0.203	2.44	
2/9/2013	3:47:00	14.707	14.532	0.175	0.404	2.16	-0.224	2.68	
2/9/2013	4:02:00	14.704	14.540	0.164	0.378	2.16	-0.198	2.38	
2/9/2013	4:17:00	14.714	14.538	0.176	0.406	2.16	-0.226	2.71	
2/9/2013	4:32:00	14.712	14.549	0.163	0.376	2.16	-0.196	2.35	
2/9/2013	4:47:00	14.713	14.546	0.167	0.385	2.16	-0.205	2.46	
2/9/2013	5:02:00	14.715	14.555	0.160	0.369	2.16	-0.189	2.27	
2/9/2013	5:17:00	14.715	14.553	0.162	0.374	2.16	-0.194	2.32	
2/9/2013	5:32:00	14.719	14.556	0.163	0.376	2.16	-0.196	2.35	
2/9/2013	5:47:00	14.724	14.563	0.161	0.371	2.16	-0.191	2.30	
2/9/2013	6:02:00	14.724	14.565	0.159	0.367	2.16	-0.187	2.24	
2/9/2013	6:17:00	14.733	14.575	0.158	0.365	2.16	-0.185	2.21	
2/9/2013	6:32:00	14.735	14.581	0.154	0.355	2.16	-0.175	2.10	
2/9/2013	6:47:00	14.735	14.573	0.162	0.374	2.16	-0.194	2.32	
2/9/2013	7:02:00	14.740	14.588	0.152	0.351	2.16	-0.171	2.05	
2/9/2013	7:17:00	14.748	14.576	0.172	0.397	2.16	-0.217	2.60	
2/9/2013	7:32:00	14.752	14.582	0.170	0.392	2.16	-0.212	2.55	
2/9/2013	7:47:00	14.761	14.583	0.178	0.411	2.16	-0.231	2.77	
2/9/2013	8:02:00	14.759	14.589	0.170	0.392	2.16	-0.212	2.55	
2/9/2013	8:17:00	14.760	14.587	0.173	0.399	2.16	-0.219	2.63	
2/9/2013	8:32:00	14.762	14.596	0.166	0.383	2.16	-0.203	2.44	
2/9/2013	8:47:00	14.765	14.592	0.173	0.399	2.16	-0.219	2.63	
2/9/2013	9:02:00	14.769	14.595	0.174	0.401	2.16	-0.221	2.66	
2/9/2013	9:17:00	14.768	14.600	0.168	0.388	2.16	-0.208	2.49	
2/9/2013	9:32:00	14.776	14.601	0.175	0.404	2.16	-0.224	2.68	
2/9/2013	9:47:00	14.776	14.600	0.176	0.406	2.16	-0.226	2.71	
2/9/2013	10:02:00	14.776	14.602	0.174	0.401	2.16	-0.221	2.66	
2/9/2013	10:17:00	14.777	14.600	0.177	0.408	2.16	-0.228	2.74	
2/9/2013	10:32:00	14.781	14.599	0.182	0.420	2.16	-0.240	2.88	
2/9/2013	10:47:00	14.783	14.595	0.188	0.434	2.16	-0.254	3.04	
2/9/2013	11:02:00	14.780	14.593	0.187	0.431	2.16	-0.251	3.02	
2/9/2013	11:17:00	14.781	14.593	0.188	0.434	2.16	-0.254	3.04	
2/9/2013	11:32:00	14.787	14.590	0.197	0.454	2.16	-0.274	3.29	

2/9/2013	11:47:00	14.782	14.592	0.190	0.438	2.16	-0.258	3.10
2/9/2013	12:02:00	14.782	14.583	0.199	0.459	2.16	-0.279	3.35
2/9/2013	12:17:00	14.773	14.592	0.181	0.418	2.16	-0.238	2.85
2/9/2013	12:32:00	14.777	14.586	0.191	0.441	2.16	-0.261	3.13
2/9/2013	12:47:00	14.773	14.585	0.188	0.434	2.16	-0.254	3.04
2/9/2013	13:02:00	14.774	14.582	0.192	0.443	2.16	-0.263	3.16
2/9/2013	13:17:00	14.777	14.584	0.193	0.445	2.16	-0.265	3.18
2/9/2013	13:32:00	14.771	14.577	0.194	0.448	2.16	-0.268	3.21
2/9/2013	13:47:00	14.773	14.575	0.198	0.457	2.16	-0.277	3.32
2/9/2013	14:02:00	14.765	14.577	0.188	0.434	2.16	-0.254	3.04
2/9/2013	14:17:00	14.761	14.580	0.181	0.418	2.16	-0.238	2.85
2/9/2013	14:32:00	14.763	14.578	0.185	0.427	2.16	-0.247	2.96
2/9/2013	14:47:00	14.757	14.577	0.180	0.415	2.16	-0.235	2.82
2/9/2013	15:02:00	14.767	14.573	0.194	0.448	2.16	-0.268	3.21
2/9/2013	15:17:00	14.764	14.570	0.194	0.448	2.16	-0.268	3.21
2/9/2013	15:32:00	14.767	14.573	0.194	0.448	2.16	-0.268	3.21
2/9/2013	15:47:00	14.759	14.573	0.186	0.429	2.16	-0.249	2.99
2/9/2013	16:02:00	14.759	14.576	0.183	0.422	2.16	-0.242	2.91
2/9/2013	16:17:00	14.765	14.579	0.186	0.429	2.16	-0.249	2.99
2/9/2013	16:32:00	14.764	14.584	0.180	0.415	2.16	-0.235	2.82
2/9/2013	16:47:00	14.764	14.581	0.183	0.422	2.16	-0.242	2.91
2/9/2013	17:02:00	14.749	14.586	0.163	0.376	2.16	-0.196	2.35
2/9/2013	17:17:00	14.767	14.586	0.181	0.418	2.16	-0.238	2.85
2/9/2013	17:32:00	14.619	14.592	0.027	0.062	2.16	0.118	-1.41
2/9/2013	17:47:00	14.779	14.594	0.185	0.427	2.16	-0.247	2.96
2/9/2013	18:02:00	14.773	14.598	0.175	0.404	2.16	-0.224	2.68
2/9/2013	18:17:00	14.778	14.599	0.179	0.413	2.16	-0.233	2.80
2/9/2013	18:32:00	14.778	14.599	0.179	0.413	2.16	-0.233	2.80
2/9/2013	18:47:00	14.780	14.605	0.175	0.404	2.16	-0.224	2.68
2/9/2013	19:02:00	14.786	14.610	0.176	0.406	2.16	-0.226	2.71
2/9/2013	19:17:00	14.791	14.613	0.178	0.411	2.16	-0.231	2.77
2/9/2013	19:32:00	14.790	14.612	0.178	0.411	2.16	-0.231	2.77
2/9/2013	19:47:00	14.795	14.612	0.183	0.422	2.16	-0.242	2.91
2/9/2013	20:02:00	14.798	14.614	0.184	0.424	2.16	-0.244	2.93
2/9/2013	20:17:00	14.800	14.622	0.178	0.411	2.16	-0.231	2.77
2/9/2013	20:32:00	14.801	14.622	0.179	0.413	2.16	-0.233	2.80
2/9/2013	20:47:00	14.798	14.622	0.176	0.406	2.16	-0.226	2.71
2/9/2013	21:02:00	14.799	14.624	0.175	0.404	2.16	-0.224	2.68
2/9/2013	21:17:00	14.803	14.621	0.182	0.420	2.16	-0.240	2.88
2/9/2013	21:32:00	14.804	14.620	0.184	0.424	2.16	-0.244	2.93
2/9/2013	21:47:00	14.806	14.620	0.186	0.429	2.16	-0.249	2.99
2/9/2013	22:02:00	14.804	14.621	0.183	0.422	2.16	-0.242	2.91
2/9/2013	22:17:00	14.811	14.625	0.186	0.429	2.16	-0.249	2.99
2/9/2013	22:32:00	14.806	14.618	0.188	0.434	2.16	-0.254	3.04
2/9/2013	22:47:00	14.804	14.621	0.183	0.422	2.16	-0.242	2.91
2/9/2013	23:02:00	14.803	14.624	0.179	0.413	2.16	-0.233	2.80
2/9/2013	23:17:00	14.808	14.624	0.184	0.424	2.16	-0.244	2.93
2/9/2013	23:32:00	14.798	14.632	0.166	0.383	2.16	-0.203	2.44
2/9/2013	23:47:00	14.800	14.631	0.169	0.390	2.16	-0.210	2.52
2/10/2013	0:02:00	14.803	14.628	0.175	0.404	2.16	-0.224	2.68
2/10/2013	0:17:00	14.806	14.631	0.175	0.404	2.16	-0.224	2.68
2/10/2013	0:32:00	14.808	14.630	0.178	0.411	2.16	-0.231	2.77
2/10/2013	0:47:00	14.806	14.637	0.169	0.390	2.16	-0.210	2.52
2/10/2013	1:02:00	14.811	14.639	0.172	0.397	2.16	-0.217	2.60
2/10/2013	1:17:00	14.814	14.629	0.185	0.427	2.16	-0.247	2.96
2/10/2013	1:32:00	14.816	14.642	0.174	0.401	2.16	-0.221	2.66
2/10/2013	1:47:00	14.818	14.631	0.187	0.431	2.16	-0.251	3.02
2/10/2013	2:02:00	14.816	14.633	0.183	0.422	2.16	-0.242	2.91
2/10/2013	2:17:00	14.815	14.639	0.176	0.406	2.16	-0.226	2.71
2/10/2013	2:32:00	14.818	14.634	0.184	0.424	2.16	-0.244	2.93
2/10/2013	2:47:00	14.813	14.641	0.172	0.397	2.16	-0.217	2.60
2/10/2013	3:02:00	14.819	14.638	0.181	0.418	2.16	-0.238	2.85
2/10/2013	3:17:00	14.817	14.637	0.180	0.415	2.16	-0.235	2.82
2/10/2013	3:32:00	14.821	14.636	0.185	0.427	2.16	-0.247	2.96
2/10/2013	3:47:00	14.822	14.639	0.183	0.422	2.16	-0.242	2.91
2/10/2013	4:02:00	14.817	14.649	0.168	0.388	2.16	-0.208	2.49
2/10/2013	4:17:00	14.819	14.641	0.178	0.411	2.16	-0.231	2.77
2/10/2013	4:32:00	14.820	14.640	0.180	0.415	2.16	-0.235	2.82
2/10/2013	4:47:00	14.820	14.642	0.178	0.411	2.16	-0.231	2.77
2/10/2013	5:02:00	14.823	14.647	0.176	0.406	2.16	-0.226	2.71
2/10/2013	5:17:00	14.824	14.650	0.174	0.401	2.16	-0.221	2.66
2/10/2013	5:32:00	14.827	14.643	0.184	0.424	2.16	-0.244	2.93
2/10/2013	5:47:00	14.820	14.653	0.167	0.385	2.16	-0.205	2.46
2/10/2013	6:02:00	14.826	14.666	0.160	0.369	2.16	-0.189	2.27
2/10/2013	6:17:00	14.829	14.667	0.162	0.374	2.16	-0.194	2.32
2/10/2013	6:32:00	14.829	14.655	0.174	0.401	2.16	-0.221	2.66
2/10/2013	6:47:00	14.830	14.674	0.156	0.360	2.16	-0.180	2.16
2/10/2013	7:02:00	14.835	14.664	0.171	0.394	2.16	-0.214	2.57
2/10/2013	7:17:00	14.835	14.680	0.155	0.358	2.16	-0.178	2.13
2/10/2013	7:32:00	14.843	14.680	0.163	0.376	2.16	-0.196	2.35
2/10/2013	7:47:00	14.846	14.669	0.177	0.408	2.16	-0.228	2.74
2/10/2013	8:02:00	14.857	14.678	0.179	0.413	2.16	-0.233	2.80
2/10/2013	8:17:00	14.858	14.666	0.192	0.443	2.16	-0.263	3.16
2/10/2013	8:32:00	14.861	14.669	0.192	0.443	2.16	-0.263	3.16
2/10/2013	8:47:00	14.854	14.670	0.184	0.424	2.16	-0.244	2.93
2/10/2013	9:02:00	14.850	14.672	0.178	0.411	2.16	-0.231	2.77
2/10/2013	9:17:00	14.855	14.667	0.188	0.434	2.16	-0.254	3.04
2/10/2013	9:32:00	14.854	14.677	0.177	0.408	2.16	-0.228	2.74
2/10/2013	9:47:00	14.856	14.682	0.174	0.401	2.16	-0.221	2.66
2/10/2013	10:02:00	14.856	14.676	0.180	0.415	2.16	-0.235	2.82
2/10/2013	10:17:00	14.858	14.675	0.183	0.422	2.16	-0.242	2.91
2/10/2013	10:32:00	14.858	14.671	0.187	0.431	2.16	-0.251	3.02
2/10/2013	10:47:00	14.863	14.656	0.207	0.478	2.16	-0.298	3.57
2/10/2013	11:02:00	14.861	14.651	0.210	0.484	2.16	-0.304	3.65
2/10/2013	11:17:00	14.860	14.650	0.210	0.484	2.16	-0.304	3.65
2/10/2013	11:32:00	14.857	14.643	0.214	0.494	2.16	-0.314	3.76
2/10/2013	11:47:00	14.852	14.635	0.217	0.501	2.16	-0.321	3.85
2/10/2013	12:02:00	14.841	14.639	0.202	0.466	2.16	-0.286	3.43
2/10/2013	12:17:00	14.835	14.639	0.196	0.452	2.16	-0.272	3.27
2/10/2013	12:32:00	14.831	14.629	0.202	0.466	2.16	-0.286	3.43
2/10/2013	12:47:00	14.824	14.618	0.206	0.475	2.16	-0.295	3.54
2/10/2013	13:02:00	14.826	14.615	0.211	0.487	2.16	-0.307	3.68
2/10/2013	13:17:00	14.824	14.603	0.221	0.510	2.16	-0.330	3.96
2/10/2013	13:32:00	14.819	14.600	0.219	0.505	2.16	-0.325	3.90
2/10/2013	13:47:00	14.810	14.600	0.210	0.484	2.16	-0.304	3.65
2/10/2013	14:02:00	14.799	14.595	0.204	0.471	2.16	-0.291	3.49
2/10/2013	14:17:00	14.794	14.598	0.196	0.452	2.16	-0.272	3.27
2/10/2013	14:32:00	14.792	14.596	0.196	0.452	2.16	-0.272	3.27
2/10/2013	14:47:00	14.785	14.591	0.194	0.448	2.16	-0.268	3.21
2/10/2013	15:02:00	14.781	14.593	0.188	0.434	2.16	-0.254	3.04
2/10/2013	15:17:00	14.777	14.592	0.185	0.427	2.16	-0.247	2.96
2/10/2013	15:32:00	14.774	14.589	0.185	0.427	2.16	-0.247	2.96
2/10/2013	15:47:00	14.778	14.584	0.194	0.448	2.16	-0.268	3.21
2/10/2013	16:02:00	14.780	14.584	0.196	0.452	2.16	-0.272	3.27
2/10/2013	16:17:00	14.785	14.578	0.207	0.478	2.16	-0.298	3.57
2/10/2013	16:32:00	14.776	14.574	0.202	0.466	2.16	-0.286	3.43
2/10/2013	16:47:00	14.770	14.574	0.196	0.452	2.16	-0.272	3.27
2/10/2013	17:02:00	14.771	14.578	0.193	0.445	2.16	-0.265	3.18
2/10/2013	17:17:00	14.766	14.575	0.191	0.441	2.16	-0.261	3.13
2/10/2013	17:32:00	14.764	14.581	0.183	0.422	2.16	-0.242	2.91
2/10/2013	17:47:00	14.759	14.577	0.182	0.420	2.16	-0.240	2.88
2/10/2013	18:02:00	14.762	14.579	0.183	0.422	2.16	-0.242	2.91
2/10/2013	18:17:00	14.761	14.571	0.190	0.438	2.16	-0.258	3.10
2/10/2013	18:32:00	14.758	14.567	0.191	0.441	2.16	-0.261	3.13
2/10/2013	18:47:00	14.753	14.568	0.185	0.427	2.16	-0.247	2.96
2/10/2013	19:02:00	14.756	14.576	0.180	0.415	2.16	-0.235	2.82
2/10/2013	19:17:00	14.761	14.576	0.185	0.427	2.16	-0.247	2.96
2/10/2013	19:32:00	14.750	14.580	0.170	0.392	2.16	-0.212	2.55
2/10/2013	19:47:00	14.751	14.582	0.169	0.390	2.16	-0.210	2.52
2/10/2013	20:02:00	14.759	14.593	0.166	0.383	2.16	-0.203	2.44
2/10/2013	20:17:00	14.762	14.599	0.163	0.376	2.16	-0.196	2.35
2/10/2013	20:32:00	14.764	14.596	0.168	0.388	2.16	-0.208	2.49
2/10/2013	20:47:00	14.763	14.594	0.169	0.390	2.16	-0.210	2.52

2/10/2013	21:02:00	14.769	14.591	0.178	0.411	2.16	-0.231	2.77	0.01
2/10/2013	21:17:00	14.777	14.574	0.203	0.468	2.16	-0.288	3.46	0.02
2/10/2013	21:32:00	14.784	14.570	0.214	0.494	2.16	-0.314	3.76	0.04
2/10/2013	21:47:00	14.783	14.571	0.212	0.489	2.16	-0.309	3.71	0.05
2/10/2013	22:02:00	14.777	14.562	0.215	0.496	2.16	-0.316	3.79	0.06
2/10/2013	22:17:00	14.772	14.552	0.220	0.508	2.16	-0.328	3.93	0.07
2/10/2013	22:32:00	14.765	14.554	0.211	0.487	2.16	-0.307	3.68	0.08
2/10/2013	22:47:00	14.767	14.548	0.219	0.505	2.16	-0.325	3.90	0.09
2/10/2013	23:02:00	14.760	14.551	0.209	0.482	2.16	-0.302	3.63	0.10
2/10/2013	23:17:00	14.755	14.545	0.210	0.484	2.16	-0.304	3.65	0.11
2/10/2013	23:32:00	14.758	14.545	0.213	0.491	2.16	-0.311	3.74	0.13
2/10/2013	23:47:00	14.759	14.546	0.213	0.491	2.16	-0.311	3.74	0.14
2/11/2013	0:02:00	14.759	14.538	0.221	0.510	2.16	-0.330	3.96	
2/11/2013	0:17:00	14.752	14.530	0.222	0.512	2.16	-0.332	3.99	
2/11/2013	0:32:00	14.755	14.532	0.223	0.514	2.16	-0.334	4.01	0.01
2/11/2013	0:47:00	14.749	14.526	0.223	0.514	2.16	-0.334	4.01	
2/11/2013	1:02:00	14.749	14.523	0.226	0.521	2.16	-0.341	4.10	
2/11/2013	1:17:00	14.741	14.522	0.219	0.505	2.16	-0.325	3.90	
2/11/2013	1:32:00	14.735	14.524	0.211	0.487	2.16	-0.307	3.68	
2/11/2013	1:47:00	14.726	14.525	0.201	0.464	2.16	-0.284	3.40	0.02
2/11/2013	2:02:00	14.722	14.516	0.206	0.475	2.16	-0.295	3.54	
2/11/2013	2:17:00	14.723	14.514	0.209	0.482	2.16	-0.302	3.63	
2/11/2013	2:32:00	14.721	14.507	0.214	0.494	2.16	-0.314	3.76	
2/11/2013	2:47:00	14.717	14.510	0.207	0.478	2.16	-0.298	3.57	
2/11/2013	3:02:00	14.717	14.505	0.212	0.489	2.16	-0.309	3.71	
2/11/2013	3:17:00	14.705	14.496	0.209	0.482	2.16	-0.302	3.63	
2/11/2013	3:32:00	14.702	14.496	0.206	0.475	2.16	-0.295	3.54	
2/11/2013	3:47:00	14.703	14.499	0.204	0.471	2.16	-0.291	3.49	
2/11/2013	4:02:00	14.697	14.496	0.201	0.464	2.16	-0.284	3.40	
2/11/2013	4:17:00	14.700	14.497	0.203	0.468	2.16	-0.288	3.46	0.03
2/11/2013	4:32:00	14.693	14.501	0.192	0.443	2.16	-0.263	3.16	0.04
2/11/2013	4:47:00	14.692	14.502	0.190	0.438	2.16	-0.258	3.10	
2/11/2013	5:02:00	14.690	14.507	0.183	0.422	2.16	-0.242	2.91	
2/11/2013	5:17:00	14.698	14.502	0.196	0.452	2.16	-0.272	3.27	0.05
2/11/2013	5:32:00	14.706	14.499	0.207	0.478	2.16	-0.298	3.57	0.06
2/11/2013	5:47:00	14.711	14.497	0.214	0.494	2.16	-0.314	3.76	0.07
2/11/2013	6:02:00	14.708	14.499	0.209	0.482	2.16	-0.302	3.63	0.08
2/11/2013	6:17:00	14.709	14.499	0.210	0.484	2.16	-0.304	3.65	0.09
2/11/2013	6:32:00	14.722	14.505	0.217	0.501	2.16	-0.321	3.85	0.11
2/11/2013	6:47:00	14.721	14.496	0.225	0.519	2.16	-0.339	4.07	0.12
2/11/2013	7:02:00	14.731	14.497	0.234	0.540	2.16	-0.360	4.32	
2/11/2013	7:17:00	14.733	14.497	0.236	0.544	2.16	-0.364	4.37	
2/11/2013	7:32:00	14.740	14.502	0.238	0.549	2.16	-0.369	4.43	
2/11/2013	7:47:00	14.739	14.503	0.236	0.544	2.16	-0.364	4.37	0.13
2/11/2013	8:02:00	14.733	14.500	0.233	0.538	2.16	-0.358	4.29	
2/11/2013	8:17:00	14.738	14.502	0.236	0.544	2.16	-0.364	4.37	0.14
2/11/2013	8:32:00	14.736	14.502	0.234	0.540	2.16	-0.360	4.32	
2/11/2013	8:47:00	14.737	14.490	0.247	0.570	2.16	-0.390	4.68	
2/11/2013	9:02:00	14.745	14.497	0.248	0.572	2.16	-0.392	4.71	
2/11/2013	9:17:00	14.751	14.489	0.262	0.604	2.16	-0.424	5.09	
2/11/2013	9:32:00	14.751	14.484	0.267	0.616	2.16	-0.436	5.23	
2/11/2013	9:47:00	14.747	14.482	0.265	0.611	2.16	-0.431	5.18	
2/11/2013	10:02:00	14.739	14.480	0.259	0.598	2.16	-0.418	5.01	
2/11/2013	10:17:00	14.742	14.484	0.258	0.595	2.16	-0.415	4.98	
2/11/2013	10:32:00	14.735	14.477	0.258	0.595	2.16	-0.415	4.98	
2/11/2013	10:47:00	14.728	14.484	0.244	0.563	2.16	-0.383	4.59	
2/11/2013	11:02:00	14.728	14.479	0.249	0.574	2.16	-0.394	4.73	
2/11/2013	11:17:00	14.719	14.481	0.238	0.549	2.16	-0.369	4.43	
2/11/2013	11:32:00	14.722	14.480	0.242	0.558	2.16	-0.378	4.54	
2/11/2013	11:47:00	14.717	14.473	0.244	0.563	2.16	-0.383	4.59	
2/11/2013	12:02:00	14.725	14.466	0.259	0.598	2.16	-0.418	5.01	
2/11/2013	12:17:00	14.715	14.460	0.255	0.588	2.16	-0.408	4.90	
2/11/2013	12:32:00	14.719	14.461	0.258	0.595	2.16	-0.415	4.98	
2/11/2013	12:47:00	14.709	14.450	0.259	0.598	2.16	-0.418	5.01	
2/11/2013	13:02:00	14.695	14.461	0.234	0.540	2.16	-0.360	4.32	
2/11/2013	13:17:00	14.694	14.456	0.238	0.549	2.16	-0.369	4.43	
2/11/2013	13:32:00	14.692	14.456	0.236	0.544	2.16	-0.364	4.37	
2/11/2013	13:47:00	14.676	14.467	0.209	0.482	2.16	-0.302	3.63	
2/11/2013	14:02:00	14.686	14.464	0.222	0.512	2.16	-0.332	3.99	
2/11/2013	14:17:00	14.675	14.459	0.216	0.498	2.16	-0.318	3.82	
2/11/2013	14:32:00	14.689	14.454	0.235	0.542	2.16	-0.362	4.35	
2/11/2013	14:47:00	14.683	14.454	0.229	0.528	2.16	-0.348	4.18	
2/11/2013	15:02:00	14.699	14.453	0.246	0.568	2.16	-0.388	4.65	
2/11/2013	15:17:00	14.682	14.451	0.231	0.533	2.16	-0.353	4.24	
2/11/2013	15:32:00	14.682	14.454	0.228	0.526	2.16	-0.346	4.15	0.15
2/11/2013	15:47:00	14.691	14.451	0.240	0.554	2.16	-0.374	4.48	
2/11/2013	16:02:00	14.684	14.450	0.234	0.540	2.16	-0.360	4.32	
2/11/2013	16:17:00	14.672	14.447	0.225	0.519	2.16	-0.339	4.07	
2/11/2013	16:32:00	14.693	14.434	0.259	0.598	2.16	-0.418	5.01	
2/11/2013	16:47:00	14.669	14.435	0.234	0.540	2.16	-0.360	4.32	
2/11/2013	17:02:00	14.687	14.454	0.233	0.538	2.16	-0.358	4.29	
2/11/2013	17:17:00	14.690	14.458	0.232	0.535	2.16	-0.355	4.26	0.16
2/11/2013	17:32:00	14.651	14.462	0.189	0.436	2.16	-0.256	3.07	
2/11/2013	17:47:00	14.670	14.460	0.210	0.484	2.16	-0.304	3.65	
2/11/2013	18:02:00	14.655	14.453	0.202	0.466	2.16	-0.286	3.43	
2/11/2013	18:17:00	14.690	14.453	0.237	0.547	2.16	-0.367	4.40	
2/11/2013	18:32:00	14.688	14.457	0.231	0.533	2.16	-0.353	4.24	
2/11/2013	18:47:00	14.691	14.458	0.233	0.538	2.16	-0.358	4.29	
2/11/2013	19:02:00	14.695	14.460	0.235	0.542	2.16	-0.362	4.35	
2/11/2013	19:17:00	14.691	14.460	0.231	0.533	2.16	-0.353	4.24	
2/11/2013	19:32:00	14.678	14.459	0.219	0.505	2.16	-0.325	3.90	
2/11/2013	19:47:00	14.684	14.459	0.225	0.519	2.16	-0.339	4.07	
2/11/2013	20:02:00	14.690	14.462	0.228	0.526	2.16	-0.346	4.15	
2/11/2013	20:17:00	14.691	14.458	0.233	0.538	2.16	-0.358	4.29	
2/11/2013	20:32:00	14.688	14.463	0.225	0.519	2.16	-0.339	4.07	
2/11/2013	20:47:00	14.681	14.453	0.228	0.526	2.16	-0.346	4.15	
2/11/2013	21:02:00	14.681	14.460	0.221	0.510	2.16	-0.330	3.96	
2/11/2013	21:17:00	14.685	14.457	0.228	0.526	2.16	-0.346	4.15	
2/11/2013	21:32:00	14.689	14.460	0.229	0.528	2.16	-0.348	4.18	
2/11/2013	21:47:00	14.686	14.455	0.231	0.533	2.16	-0.353	4.24	
2/11/2013	22:02:00	14.681	14.454	0.227	0.524	2.16	-0.344	4.12	
2/11/2013	22:17:00	14.679	14.448	0.231	0.533	2.16	-0.353	4.24	
2/11/2013	22:32:00	14.678	14.460	0.218	0.503	2.16	-0.323	3.88	
2/11/2013	22:47:00	14.676	14.458	0.218	0.503	2.16	-0.323	3.88	
2/11/2013	23:02:00	14.673	14.454	0.219	0.505	2.16	-0.325	3.90	
2/11/2013	23:17:00	14.666	14.454	0.212	0.489	2.16	-0.309	3.71	
2/11/2013	23:32:00	14.672	14.458	0.214	0.494	2.16	-0.314	3.76	
2/11/2013	23:47:00	14.674	14.461	0.213	0.491	2.16	-0.311	3.74	
2/12/2013	0:02:00	14.675	14.461	0.214	0.494	2.16	-0.314	3.76	
2/12/2013	0:17:00	14.675	14.457	0.218	0.503	2.16	-0.323	3.88	
2/12/2013	0:32:00	14.673	14.464	0.209	0.482	2.16	-0.302	3.63	
2/12/2013	0:47:00	14.677	14.462	0.215	0.496	2.16	-0.316	3.79	
2/12/2013	1:02:00	14.683	14.456	0.227	0.524	2.16	-0.344	4.12	
2/12/2013	1:17:00	14.682	14.462	0.220	0.508	2.16	-0.328	3.93	
2/12/2013	1:32:00	14.681	14.461	0.220	0.508	2.16	-0.328	3.93	
2/12/2013	1:47:00	14.683	14.449	0.234	0.540	2.16	-0.360	4.32	
2/12/2013	2:02:00	14.677	14.453	0.224	0.517	2.16	-0.337	4.04	
2/12/2013	2:17:00	14.675	14.457	0.218	0.503	2.16	-0.323	3.88	
2/12/2013	2:32:00	14.670	14.464	0.206	0.475	2.16	-0.295	3.54	
2/12/2013	2:47:00	14.673	14.457	0.216	0.498	2.16	-0.318	3.82	
2/12/2013	3:02:00	14.669	14.455	0.214	0.494	2.16	-0.314	3.76	
2/12/2013	3:17:00	14.673	14.453	0.220	0.508	2.16	-0.328	3.93	
2/12/2013	3:32:00	14.670	14.460	0.210	0.484	2.16	-0.304	3.65	
2/12/2013	3:47:00	14.668	14.455	0.213	0.491	2.16	-0.311	3.74	
2/12/2013	4:02:00	14.665	14.461	0.204	0.471	2.16	-0.291	3.49	
2/12/2013	4:17:00	14.667	14.459	0.208	0.480	2.16	-0.300	3.60	
2/12/2013	4:32:00	14.667	14.472	0.195	0.450	2.16	-0.270	3.24	
2/12/2013	4:47:00	14.669	14.474	0.195	0.450	2.16	-0.270	3.24	
2/12/2013	5:02:00	14.668	14.471	0.197	0.454	2.16	-0.274	3.29	
2/12/2013	5:17:00	14.674	14.473	0.201	0.464	2.16	-0.284	3.40	
2/12/2013	5:32:00	14.675	14.472	0.203	0.468	2.16	-0.288	3.46	
2/12/2013	5:47:00	14.681	14.478	0.203	0.468	2.16	-0.288	3.46	
2/12/2013	6:02:00	14.680	14.478	0.202	0.466	2.16	-0.286	3.43	

2/12/2013	6:17:00	14.685	14.474	0.211	0.487	2.16	-0.307	3.68	
2/12/2013	6:32:00	14.680	14.470	0.210	0.484	2.16	-0.304	3.65	
2/12/2013	6:47:00	14.682	14.479	0.203	0.468	2.16	-0.288	3.46	
2/12/2013	7:02:00	14.686	14.486	0.200	0.461	2.16	-0.281	3.38	
2/12/2013	7:17:00	14.683	14.487	0.196	0.452	2.16	-0.272	3.27	
2/12/2013	7:32:00	14.684	14.490	0.194	0.448	2.16	-0.268	3.21	
2/12/2013	7:47:00	14.692	14.496	0.196	0.452	2.16	-0.272	3.27	
2/12/2013	8:02:00	14.692	14.497	0.195	0.450	2.16	-0.270	3.24	
2/12/2013	8:17:00	14.692	14.502	0.190	0.438	2.16	-0.258	3.10	
2/12/2013	8:32:00	14.701	14.495	0.206	0.475	2.16	-0.295	3.54	
2/12/2013	8:47:00	14.713	14.506	0.207	0.478	2.16	-0.298	3.57	
2/12/2013	9:02:00	14.713	14.506	0.207	0.478	2.16	-0.298	3.57	
2/12/2013	9:17:00	14.710	14.509	0.201	0.464	2.16	-0.284	3.40	
2/12/2013	9:32:00	14.714	14.503	0.211	0.487	2.16	-0.307	3.68	
2/12/2013	9:47:00	14.709	14.494	0.215	0.496	2.16	-0.316	3.79	
2/12/2013	10:02:00	14.718	14.501	0.217	0.501	2.16	-0.321	3.85	
2/12/2013	10:17:00	14.724	14.496	0.228	0.526	2.16	-0.346	4.15	
2/12/2013	10:32:00	14.721	14.489	0.232	0.535	2.16	-0.355	4.26	
2/12/2013	10:47:00	14.707	14.487	0.220	0.508	2.16	-0.328	3.93	
2/12/2013	11:02:00	14.701	14.492	0.209	0.482	2.16	-0.302	3.63	
2/12/2013	11:17:00	14.698	14.489	0.209	0.482	2.16	-0.302	3.63	
2/12/2013	11:32:00	14.706	14.481	0.225	0.519	2.16	-0.339	4.07	
2/12/2013	11:47:00	14.706	14.478	0.228	0.526	2.16	-0.346	4.15	
2/12/2013	12:02:00	14.699	14.466	0.233	0.538	2.16	-0.358	4.29	
2/12/2013	12:17:00	14.707	14.462	0.245	0.565	2.16	-0.385	4.62	
2/12/2013	12:32:00	14.697	14.465	0.232	0.535	2.16	-0.355	4.26	
2/12/2013	12:47:00	14.691	14.463	0.228	0.526	2.16	-0.346	4.15	
2/12/2013	13:02:00	14.678	14.459	0.219	0.505	2.16	-0.325	3.90	
2/12/2013	13:17:00	14.675	14.463	0.212	0.489	2.16	-0.309	3.71	
2/12/2013	13:32:00	14.670	14.465	0.205	0.473	2.16	-0.293	3.52	
2/12/2013	13:47:00	14.675	14.460	0.215	0.496	2.16	-0.316	3.79	
2/12/2013	14:02:00	14.664	14.461	0.203	0.468	2.16	-0.288	3.46	
2/12/2013	14:17:00	14.667	14.458	0.209	0.482	2.16	-0.302	3.63	
2/12/2013	14:32:00	14.672	14.453	0.219	0.505	2.16	-0.325	3.90	
2/12/2013	14:47:00	14.670	14.448	0.222	0.512	2.16	-0.332	3.99	
2/12/2013	15:02:00	14.669	14.458	0.211	0.487	2.16	-0.307	3.68	
2/12/2013	15:17:00	14.670	14.450	0.220	0.508	2.16	-0.328	3.93	
2/12/2013	15:32:00	14.655	14.444	0.211	0.487	2.16	-0.307	3.68	
2/12/2013	15:47:00	14.658	14.447	0.211	0.487	2.16	-0.307	3.68	
2/12/2013	16:02:00	14.662	14.442	0.220	0.508	2.16	-0.328	3.93	
2/12/2013	16:17:00	14.660	14.448	0.212	0.489	2.16	-0.309	3.71	
2/12/2013	16:32:00	14.654	14.451	0.203	0.468	2.16	-0.288	3.46	
2/12/2013	16:47:00	14.651	14.442	0.209	0.482	2.16	-0.302	3.63	
2/12/2013	17:02:00	14.650	14.443	0.207	0.478	2.16	-0.298	3.57	
2/12/2013	17:17:00	14.649	14.442	0.207	0.478	2.16	-0.298	3.57	
2/12/2013	17:32:00	14.650	14.433	0.217	0.501	2.16	-0.321	3.85	
2/12/2013	17:47:00	14.657	14.436	0.221	0.510	2.16	-0.330	3.96	
2/12/2013	18:02:00	14.639	14.421	0.218	0.503	2.16	-0.323	3.88	
2/12/2013	18:17:00	14.631	14.422	0.209	0.482	2.16	-0.302	3.63	
2/12/2013	18:32:00	14.657	14.423	0.234	0.540	2.16	-0.360	4.32	
2/12/2013	18:47:00	14.630	14.433	0.197	0.454	2.16	-0.274	3.29	
2/12/2013	19:02:00	14.635	14.443	0.192	0.443	2.16	-0.263	3.16	
2/12/2013	19:17:00	14.638	14.446	0.192	0.443	2.16	-0.263	3.16	
2/12/2013	19:32:00	14.632	14.447	0.185	0.427	2.16	-0.247	2.96	
2/12/2013	19:47:00	14.631	14.437	0.194	0.448	2.16	-0.268	3.21	
2/12/2013	20:02:00	14.637	14.448	0.189	0.436	2.16	-0.256	3.07	
2/12/2013	20:17:00	14.648	14.453	0.195	0.450	2.16	-0.270	3.24	
2/12/2013	20:32:00	14.652	14.451	0.201	0.464	2.16	-0.284	3.40	
2/12/2013	20:47:00	14.644	14.452	0.192	0.443	2.16	-0.263	3.16	
2/12/2013	21:02:00	14.636	14.443	0.193	0.445	2.16	-0.265	3.18	0.01
2/12/2013	21:17:00	14.650	14.449	0.201	0.464	2.16	-0.284	3.40	
2/12/2013	21:32:00	14.654	14.446	0.208	0.480	2.16	-0.300	3.60	0.03
2/12/2013	21:47:00	14.650	14.441	0.209	0.482	2.16	-0.302	3.63	
2/12/2013	22:02:00	14.654	14.433	0.221	0.510	2.16	-0.330	3.96	0.04
2/12/2013	22:17:00	14.652	14.422	0.230	0.531	2.16	-0.351	4.21	
2/12/2013	22:32:00	14.661	14.417	0.244	0.563	2.16	-0.383	4.59	
2/12/2013	22:47:00	14.660	14.435	0.225	0.519	2.16	-0.339	4.07	0.05
2/12/2013	23:02:00	14.647	14.428	0.219	0.505	2.16	-0.325	3.90	0.06
2/12/2013	23:17:00	14.641	14.415	0.226	0.521	2.16	-0.341	4.10	0.07
2/12/2013	23:32:00	14.631	14.426	0.205	0.473	2.16	-0.293	3.52	0.08
2/12/2013	23:47:00	14.629	14.400	0.229	0.528	2.16	-0.348	4.18	0.09
2/13/2013	0:02:00	14.653	14.397	0.256	0.591	2.16	-0.411	4.93	0.01
2/13/2013	0:17:00	14.640	14.388	0.252	0.581	2.16	-0.401	4.82	0.02
2/13/2013	0:32:00	14.647	14.400	0.247	0.570	2.16	-0.390	4.68	
2/13/2013	0:47:00	14.651	14.386	0.265	0.611	2.16	-0.431	5.18	0.03
2/13/2013	1:02:00	14.633	14.381	0.252	0.581	2.16	-0.401	4.82	
2/13/2013	1:17:00	14.636	14.386	0.250	0.577	2.16	-0.397	4.76	
2/13/2013	1:32:00	14.629	14.384	0.245	0.565	2.16	-0.385	4.62	
2/13/2013	1:47:00	14.637	14.385	0.252	0.581	2.16	-0.401	4.82	
2/13/2013	2:02:00	14.628	14.379	0.249	0.574	2.16	-0.394	4.73	
2/13/2013	2:17:00	14.627	14.382	0.245	0.565	2.16	-0.385	4.62	
2/13/2013	2:32:00	14.627	14.374	0.253	0.584	2.16	-0.404	4.84	
2/13/2013	2:47:00	14.626	14.371	0.255	0.588	2.16	-0.408	4.90	
2/13/2013	3:02:00	14.625	14.378	0.247	0.570	2.16	-0.390	4.68	0.04
2/13/2013	3:17:00	14.626	14.373	0.253	0.584	2.16	-0.404	4.84	
2/13/2013	3:32:00	14.623	14.374	0.249	0.574	2.16	-0.394	4.73	
2/13/2013	3:47:00	14.615	14.366	0.249	0.574	2.16	-0.394	4.73	0.05
2/13/2013	4:02:00	14.622	14.361	0.261	0.602	2.16	-0.422	5.07	
2/13/2013	4:17:00	14.615	14.362	0.253	0.584	2.16	-0.404	4.84	
2/13/2013	4:32:00	14.623	14.356	0.267	0.616	2.16	-0.436	5.23	0.06
2/13/2013	4:47:00	14.620	14.361	0.259	0.598	2.16	-0.418	5.01	0.07
2/13/2013	5:02:00	14.615	14.366	0.249	0.574	2.16	-0.394	4.73	
2/13/2013	5:17:00	14.611	14.362	0.249	0.574	2.16	-0.394	4.73	
2/13/2013	5:32:00	14.611	14.360	0.251	0.579	2.16	-0.399	4.79	
2/13/2013	5:47:00	14.605	14.359	0.246	0.568	2.16	-0.388	4.65	
2/13/2013	6:02:00	14.614	14.353	0.261	0.602	2.16	-0.422	5.07	
2/13/2013	6:17:00	14.608	14.358	0.250	0.577	2.16	-0.397	4.76	
2/13/2013	6:32:00	14.606	14.360	0.246	0.568	2.16	-0.388	4.65	
2/13/2013	6:47:00	14.607	14.358	0.249	0.574	2.16	-0.394	4.73	
2/13/2013	7:02:00	14.611	14.359	0.252	0.581	2.16	-0.401	4.82	
2/13/2013	7:17:00	14.599	14.347	0.252	0.581	2.16	-0.401	4.82	
2/13/2013	7:32:00	14.602	14.340	0.262	0.604	2.16	-0.424	5.09	
2/13/2013	7:47:00	14.598	14.351	0.247	0.570	2.16	-0.390	4.68	
2/13/2013	8:02:00	14.596	14.357	0.239	0.551	2.16	-0.371	4.46	
2/13/2013	8:17:00	14.606	14.342	0.264	0.609	2.16	-0.429	5.15	
2/13/2013	8:32:00	14.593	14.354	0.239	0.551	2.16	-0.371	4.46	
2/13/2013	8:47:00	14.590	14.337	0.253	0.584	2.16	-0.404	4.84	
2/13/2013	9:02:00	14.591	14.357	0.234	0.540	2.16	-0.360	4.32	
2/13/2013	9:17:00	14.594	14.338	0.256	0.591	2.16	-0.411	4.93	
2/13/2013	9:32:00	14.596	14.353	0.243	0.561	2.16	-0.381	4.57	
2/13/2013	9:47:00	14.587	14.344	0.243	0.561	2.16	-0.381	4.57	
2/13/2013	10:02:00	14.584	14.335	0.249	0.574	2.16	-0.394	4.73	0.09
2/13/2013	10:17:00	14.581	14.336	0.245	0.565	2.16	-0.385	4.62	
2/13/2013	10:32:00	14.580	14.324	0.256	0.591	2.16	-0.411	4.93	
2/13/2013	10:47:00	14.573	14.322	0.251	0.579	2.16	-0.399	4.79	
2/13/2013	11:02:00	14.565	14.332	0.233	0.538	2.16	-0.358	4.29	
2/13/2013	11:17:00	14.563	14.304	0.259	0.598	2.16	-0.418	5.01	
2/13/2013	11:32:00	14.570	14.299	0.271	0.625	2.16	-0.445	5.34	
2/13/2013	11:47:00	14.561	14.302	0.259	0.598	2.16	-0.418	5.01	
2/13/2013	12:02:00	14.565	14.287	0.278	0.641	2.16	-0.461	5.54	
2/13/2013	12:17:00	14.553	14.301	0.252	0.581	2.16	-0.401	4.82	
2/13/2013	12:32:00	14.549	14.290	0.259	0.598	2.16	-0.418	5.01	
2/13/2013	12:47:00	14.554	14.292	0.262	0.604	2.16	-0.424	5.09	
2/13/2013	13:02:00	14.538	14.281	0.257	0.593	2.16	-0.413	4.95	
2/13/2013	13:17:00	14.547	14.294	0.253	0.584	2.16	-0.404	4.84	
2/13/2013	13:32:00	14.541	14.294	0.247	0.570	2.16	-0.390	4.68	
2/13/2013	13:47:00	14.534	14.294	0.240	0.554	2.16	-0.374	4.48	
2/13/2013	14:02:00	14.535	14.295	0.240	0.554	2.16	-0.374	4.48	
2/13/2013	14:17:00	14.530	14.299	0.231	0.533	2.16	-0.353	4.24	
2/13/2013	14:32:00	14.530	14.303	0.227	0.524	2.16	-0.344	4.12	
2/13/2013	14:47:00	14.536	14.300	0.236	0.544	2.16	-0.364	4.37	
2/13/2013	15:02:00	14.536	14.304	0.232	0.535	2.16	-0.355	4.26	
2/13/2013	15:17:00	14.545	14.302	0.243	0.561	2.16	-0.381	4.57	

2/13/2013	15:32:00	14.528	14.302	0.226	0.521	2.16	-0.341	4.10
2/13/2013	15:47:00	14.539	14.293	0.246	0.568	2.16	-0.388	4.65
2/13/2013	16:02:00	14.536	14.308	0.228	0.526	2.16	-0.346	4.15
2/13/2013	16:17:00	14.538	14.313	0.225	0.519	2.16	-0.339	4.07
2/13/2013	16:32:00	14.538	14.308	0.230	0.531	2.16	-0.351	4.21
2/13/2013	16:47:00	14.531	14.318	0.213	0.491	2.16	-0.311	3.74
2/13/2013	17:02:00	14.532	14.313	0.219	0.505	2.16	-0.325	3.90
2/13/2013	17:17:00	14.528	14.322	0.206	0.475	2.16	-0.295	3.54
2/13/2013	17:32:00	14.540	14.323	0.217	0.501	2.16	-0.321	3.85
2/13/2013	17:47:00	14.544	14.317	0.227	0.524	2.16	-0.344	4.12
2/13/2013	18:02:00	14.550	14.328	0.222	0.512	2.16	-0.332	3.99
2/13/2013	18:17:00	14.554	14.331	0.223	0.514	2.16	-0.334	4.01
2/13/2013	18:32:00	14.556	14.331	0.225	0.519	2.16	-0.339	4.07
2/13/2013	18:47:00	14.551	14.338	0.213	0.491	2.16	-0.311	3.74
2/13/2013	19:02:00	14.552	14.338	0.214	0.494	2.16	-0.314	3.76
2/13/2013	19:17:00	14.559	14.338	0.221	0.510	2.16	-0.330	3.96
2/13/2013	19:32:00	14.565	14.345	0.220	0.508	2.16	-0.328	3.93
2/13/2013	19:47:00	14.566	14.347	0.219	0.505	2.16	-0.325	3.90
2/13/2013	20:02:00	14.566	14.347	0.219	0.505	2.16	-0.325	3.90
2/13/2013	20:17:00	14.567	14.356	0.211	0.487	2.16	-0.307	3.68
2/13/2013	20:32:00	14.569	14.356	0.213	0.491	2.16	-0.311	3.74
2/13/2013	20:47:00	14.567	14.361	0.206	0.475	2.16	-0.295	3.54
2/13/2013	21:02:00	14.575	14.369	0.206	0.475	2.16	-0.295	3.54
2/13/2013	21:17:00	14.574	14.372	0.202	0.466	2.16	-0.286	3.43
2/13/2013	21:32:00	14.579	14.375	0.204	0.471	2.16	-0.291	3.49
2/13/2013	21:47:00	14.590	14.377	0.213	0.491	2.16	-0.311	3.74
2/13/2013	22:02:00	14.593	14.378	0.215	0.496	2.16	-0.316	3.79
2/13/2013	22:17:00	14.599	14.376	0.223	0.514	2.16	-0.334	4.01
2/13/2013	22:32:00	14.596	14.381	0.215	0.496	2.16	-0.316	3.79
2/13/2013	22:47:00	14.599	14.389	0.210	0.484	2.16	-0.304	3.65
2/13/2013	23:02:00	14.602	14.376	0.226	0.521	2.16	-0.341	4.10
2/13/2013	23:17:00	14.604	14.395	0.209	0.482	2.16	-0.302	3.63
2/13/2013	23:32:00	14.609	14.393	0.216	0.498	2.16	-0.318	3.82
2/13/2013	23:47:00	14.610	14.395	0.215	0.496	2.16	-0.316	3.79
2/14/2013	0:02:00	14.612	14.397	0.215	0.496	2.16	-0.316	3.79
2/14/2013	0:17:00	14.615	14.403	0.212	0.489	2.16	-0.309	3.71
2/14/2013	0:32:00	14.616	14.407	0.209	0.482	2.16	-0.302	3.63
2/14/2013	0:47:00	14.621	14.405	0.216	0.498	2.16	-0.318	3.82
2/14/2013	1:02:00	14.618	14.404	0.214	0.494	2.16	-0.314	3.76
2/14/2013	1:17:00	14.623	14.408	0.215	0.496	2.16	-0.316	3.79
2/14/2013	1:32:00	14.624	14.410	0.214	0.494	2.16	-0.314	3.76
2/14/2013	1:47:00	14.622	14.416	0.206	0.475	2.16	-0.295	3.54
2/14/2013	2:02:00	14.625	14.415	0.210	0.484	2.16	-0.304	3.65
2/14/2013	2:17:00	14.627	14.417	0.210	0.484	2.16	-0.304	3.65
2/14/2013	2:32:00	14.628	14.422	0.206	0.475	2.16	-0.295	3.54
2/14/2013	2:47:00	14.631	14.423	0.208	0.480	2.16	-0.300	3.60
2/14/2013	3:02:00	14.637	14.426	0.211	0.487	2.16	-0.307	3.68
2/14/2013	3:17:00	14.636	14.428	0.208	0.480	2.16	-0.300	3.60
2/14/2013	3:32:00	14.632	14.435	0.197	0.454	2.16	-0.274	3.29
2/14/2013	3:47:00	14.640	14.435	0.205	0.473	2.16	-0.293	3.52
2/14/2013	4:02:00	14.637	14.435	0.202	0.466	2.16	-0.286	3.43
2/14/2013	4:17:00	14.646	14.441	0.205	0.473	2.16	-0.293	3.52
2/14/2013	4:32:00	14.646	14.442	0.204	0.471	2.16	-0.291	3.49
2/14/2013	4:47:00	14.649	14.449	0.200	0.461	2.16	-0.281	3.38
2/14/2013	5:02:00	14.653	14.446	0.207	0.478	2.16	-0.298	3.57
2/14/2013	5:17:00	14.654	14.453	0.201	0.464	2.16	-0.284	3.40
2/14/2013	5:32:00	14.655	14.453	0.202	0.466	2.16	-0.286	3.43
2/14/2013	5:47:00	14.660	14.453	0.207	0.478	2.16	-0.298	3.57
2/14/2013	6:02:00	14.659	14.463	0.196	0.452	2.16	-0.272	3.27
2/14/2013	6:17:00	14.660	14.467	0.193	0.445	2.16	-0.265	3.18
2/14/2013	6:32:00	14.663	14.468	0.195	0.450	2.16	-0.270	3.24
2/14/2013	6:47:00	14.663	14.490	0.173	0.399	2.16	-0.219	2.63
2/14/2013	7:02:00	14.663	14.471	0.192	0.443	2.16	-0.263	3.16
2/14/2013	7:17:00	14.666	14.478	0.188	0.434	2.16	-0.254	3.04
2/14/2013	7:32:00	14.677	14.483	0.194	0.448	2.16	-0.268	3.21
2/14/2013	7:47:00	14.677	14.475	0.202	0.466	2.16	-0.286	3.43
2/14/2013	8:02:00	14.688	14.476	0.212	0.489	2.16	-0.309	3.71
2/14/2013	8:17:00	14.691	14.475	0.216	0.498	2.16	-0.318	3.82
2/14/2013	8:32:00	14.688	14.484	0.204	0.471	2.16	-0.291	3.49
2/14/2013	8:47:00	14.686	14.477	0.209	0.482	2.16	-0.302	3.63
2/14/2013	9:02:00	14.690	14.485	0.205	0.473	2.16	-0.293	3.52
2/14/2013	9:17:00	14.685	14.484	0.201	0.464	2.16	-0.284	3.40
2/14/2013	9:32:00	14.689	14.489	0.200	0.461	2.16	-0.281	3.38
2/14/2013	9:47:00	14.700	14.487	0.213	0.491	2.16	-0.311	3.74
2/14/2013	10:02:00	14.702	14.485	0.217	0.501	2.16	-0.321	3.85
2/14/2013	10:17:00	14.703	14.498	0.205	0.473	2.16	-0.293	3.52
2/14/2013	10:32:00	14.696	14.495	0.201	0.464	2.16	-0.284	3.40
2/14/2013	10:47:00	14.699	14.490	0.209	0.482	2.16	-0.302	3.63
2/14/2013	11:02:00	14.701	14.489	0.212	0.489	2.16	-0.309	3.71
2/14/2013	11:17:00	14.703	14.489	0.214	0.494	2.16	-0.314	3.76
2/14/2013	11:32:00	14.705	14.480	0.225	0.519	2.16	-0.339	4.07
2/14/2013	11:47:00	14.711	14.478	0.233	0.538	2.16	-0.358	4.29
2/14/2013	12:02:00	14.706	14.472	0.234	0.540	2.16	-0.360	4.32
2/14/2013	12:17:00	14.707	14.468	0.239	0.551	2.16	-0.371	4.46
2/14/2013	12:32:00	14.699	14.461	0.238	0.549	2.16	-0.369	4.43
2/14/2013	12:47:00	14.697	14.460	0.237	0.547	2.16	-0.367	4.40
2/14/2013	13:02:00	14.689	14.459	0.230	0.531	2.16	-0.351	4.21
2/14/2013	13:17:00	14.686	14.462	0.224	0.517	2.16	-0.337	4.04
2/14/2013	13:32:00	14.681	14.461	0.220	0.508	2.16	-0.328	3.93
2/14/2013	13:47:00	14.673	14.460	0.213	0.491	2.16	-0.311	3.74
2/14/2013	14:02:00	14.676	14.454	0.222	0.512	2.16	-0.332	3.99
2/14/2013	14:17:00	14.679	14.461	0.218	0.503	2.16	-0.323	3.88
2/14/2013	14:32:00	14.678	14.459	0.219	0.505	2.16	-0.325	3.90
2/14/2013	14:47:00	14.674	14.464	0.210	0.484	2.16	-0.304	3.65
2/14/2013	15:02:00	14.668	14.461	0.207	0.478	2.16	-0.298	3.57
2/14/2013	15:17:00	14.671	14.453	0.218	0.503	2.16	-0.323	3.88
2/14/2013	15:32:00	14.674	14.457	0.217	0.501	2.16	-0.321	3.85
2/14/2013	15:47:00	14.675	14.454	0.221	0.510	2.16	-0.330	3.96
2/14/2013	16:02:00	14.672	14.460	0.212	0.489	2.16	-0.309	3.71
2/14/2013	16:17:00	14.670	14.455	0.215	0.496	2.16	-0.316	3.79
2/14/2013	16:32:00	14.671	14.458	0.213	0.491	2.16	-0.311	3.74
2/14/2013	16:47:00	14.666	14.457	0.209	0.482	2.16	-0.302	3.63
2/14/2013	17:02:00	14.665	14.460	0.205	0.473	2.16	-0.293	3.52
2/14/2013	17:17:00	14.674	14.461	0.213	0.491	2.16	-0.311	3.74
2/14/2013	17:32:00	14.665	14.448	0.217	0.501	2.16	-0.321	3.85
2/14/2013	17:47:00	14.665	14.463	0.202	0.466	2.16	-0.286	3.43
2/14/2013	18:02:00	14.672	14.465	0.207	0.478	2.16	-0.298	3.57
2/14/2013	18:17:00	14.672	14.468	0.204	0.471	2.16	-0.291	3.49
2/14/2013	18:32:00	14.675	14.477	0.198	0.457	2.16	-0.277	3.32
2/14/2013	18:47:00	14.670	14.474	0.196	0.452	2.16	-0.272	3.27
2/14/2013	19:02:00	14.674	14.475	0.199	0.459	2.16	-0.279	3.35
2/14/2013	19:17:00	14.676	14.474	0.202	0.466	2.16	-0.286	3.43
2/14/2013	19:32:00	14.681	14.475	0.206	0.475	2.16	-0.295	3.54
2/14/2013	19:47:00	14.683	14.485	0.198	0.457	2.16	-0.277	3.32
2/14/2013	20:02:00	14.680	14.484	0.196	0.452	2.16	-0.272	3.27
2/14/2013	20:17:00	14.684	14.484	0.200	0.461	2.16	-0.281	3.38
2/14/2013	20:32:00	14.686	14.483	0.203	0.468	2.16	-0.288	3.46
2/14/2013	20:47:00	14.688	14.485	0.203	0.468	2.16	-0.288	3.46
2/14/2013	21:02:00	14.695	14.484	0.211	0.487	2.16	-0.307	3.68
2/14/2013	21:17:00	14.693	14.481	0.212	0.489	2.16	-0.309	3.71
2/14/2013	21:32:00	14.692	14.486	0.206	0.475	2.16	-0.295	3.54
2/14/2013	21:47:00	14.691	14.485	0.206	0.475	2.16	-0.295	3.54
2/14/2013	22:02:00	14.691	14.488	0.203	0.468	2.16	-0.288	3.46
2/14/2013	22:17:00	14.694	14.486	0.208	0.480	2.16	-0.300	3.60
2/14/2013	22:32:00	14.692	14.493	0.199	0.459	2.16	-0.279	3.35
2/14/2013	22:47:00	14.692	14.496	0.196	0.452	2.16	-0.272	3.27
2/14/2013	23:02:00	14.693	14.494	0.199	0.459	2.16	-0.279	3.35
2/14/2013	23:17:00	14.693	14.494	0.199	0.459	2.16	-0.279	3.35
2/14/2013	23:32:00	14.697	14.497	0.200	0.461	2.16	-0.281	3.38
2/14/2013	23:47:00	14.699	14.496	0.203	0.468	2.16	-0.288	3.46
2/15/2013	0:02:00	14.698	14.491	0.207	0.478	2.16	-0.298	3.57
2/15/2013	0:17:00	14.699	14.491	0.208	0.480	2.16	-0.300	3.60
2/15/2013	0:32:00	14.700	14.488	0.212	0.489	2.16	-0.309	3.71

2/15/2013	0:47:00	14.699	14.491	0.208	0.480	2.16	-0.300	3.60	
2/15/2013	1:02:00	14.694	14.493	0.201	0.464	2.16	-0.284	3.40	
2/15/2013	1:17:00	14.694	14.485	0.209	0.482	2.16	-0.302	3.63	
2/15/2013	1:32:00	14.691	14.488	0.203	0.468	2.16	-0.288	3.46	
2/15/2013	1:47:00	14.687	14.477	0.210	0.484	2.16	-0.304	3.65	
2/15/2013	2:02:00	14.691	14.485	0.206	0.475	2.16	-0.295	3.54	
2/15/2013	2:17:00	14.688	14.479	0.209	0.482	2.16	-0.302	3.63	
2/15/2013	2:32:00	14.685	14.483	0.202	0.466	2.16	-0.286	3.43	
2/15/2013	2:47:00	14.687	14.482	0.205	0.473	2.16	-0.293	3.52	
2/15/2013	3:02:00	14.687	14.486	0.201	0.464	2.16	-0.284	3.40	
2/15/2013	3:17:00	14.687	14.491	0.196	0.452	2.16	-0.272	3.27	
2/15/2013	3:32:00	14.684	14.484	0.200	0.461	2.16	-0.281	3.38	
2/15/2013	3:47:00	14.683	14.485	0.198	0.457	2.16	-0.277	3.32	
2/15/2013	4:02:00	14.683	14.486	0.197	0.454	2.16	-0.274	3.29	
2/15/2013	4:17:00	14.689	14.486	0.203	0.468	2.16	-0.288	3.46	
2/15/2013	4:32:00	14.683	14.487	0.196	0.452	2.16	-0.272	3.27	
2/15/2013	4:47:00	14.683	14.488	0.195	0.450	2.16	-0.270	3.24	
2/15/2013	5:02:00	14.685	14.492	0.193	0.445	2.16	-0.265	3.18	
2/15/2013	5:17:00	14.688	14.493	0.195	0.450	2.16	-0.270	3.24	
2/15/2013	5:32:00	14.690	14.498	0.192	0.443	2.16	-0.263	3.16	
2/15/2013	5:47:00	14.688	14.496	0.192	0.443	2.16	-0.263	3.16	
2/15/2013	6:02:00	14.690	14.493	0.197	0.454	2.16	-0.274	3.29	
2/15/2013	6:17:00	14.688	14.500	0.188	0.434	2.16	-0.254	3.04	
2/15/2013	6:32:00	14.696	14.502	0.194	0.448	2.16	-0.268	3.21	
2/15/2013	6:47:00	14.698	14.498	0.200	0.461	2.16	-0.281	3.38	
2/15/2013	7:02:00	14.697	14.498	0.199	0.459	2.16	-0.279	3.35	
2/15/2013	7:17:00	14.698	14.516	0.182	0.420	2.16	-0.240	2.88	
2/15/2013	7:32:00	14.703	14.500	0.203	0.468	2.16	-0.288	3.46	
2/15/2013	7:47:00	14.705	14.500	0.205	0.473	2.16	-0.293	3.52	
2/15/2013	8:02:00	14.701	14.499	0.202	0.466	2.16	-0.286	3.43	
2/15/2013	8:17:00	14.705	14.495	0.210	0.484	2.16	-0.304	3.65	
2/15/2013	8:32:00	14.706	14.497	0.209	0.482	2.16	-0.302	3.63	
2/15/2013	8:47:00	14.703	14.501	0.202	0.466	2.16	-0.286	3.43	
2/15/2013	9:02:00	14.702	14.500	0.202	0.466	2.16	-0.286	3.43	
2/15/2013	9:17:00	14.701	14.500	0.201	0.464	2.16	-0.284	3.40	
2/15/2013	9:32:00	14.703	14.499	0.204	0.471	2.16	-0.291	3.49	
2/15/2013	9:47:00	14.703	14.495	0.208	0.480	2.16	-0.300	3.60	
2/15/2013	10:02:00	14.702	14.490	0.212	0.489	2.16	-0.309	3.71	
2/15/2013	10:17:00	14.702	14.491	0.211	0.487	2.16	-0.307	3.68	
2/15/2013	10:32:00	14.698	14.487	0.211	0.487	2.16	-0.307	3.68	
2/15/2013	10:47:00	14.699	14.488	0.211	0.487	2.16	-0.307	3.68	
2/15/2013	11:02:00	14.701	14.487	0.214	0.494	2.16	-0.314	3.76	
2/15/2013	11:17:00	14.695	14.485	0.210	0.484	2.16	-0.304	3.65	
2/15/2013	11:32:00	14.699	14.479	0.220	0.508	2.16	-0.328	3.93	
2/15/2013	11:47:00	14.691	14.477	0.214	0.494	2.16	-0.314	3.76	
2/15/2013	12:02:00	14.690	14.472	0.218	0.503	2.16	-0.323	3.88	
2/15/2013	12:17:00	14.692	14.469	0.223	0.514	2.16	-0.334	4.01	
2/15/2013	12:32:00	14.681	14.462	0.219	0.505	2.16	-0.325	3.90	
2/15/2013	12:47:00	14.679	14.456	0.223	0.514	2.16	-0.334	4.01	
2/15/2013	13:02:00	14.691	14.455	0.236	0.544	2.16	-0.364	4.37	
2/15/2013	13:17:00	14.669	14.449	0.220	0.508	2.16	-0.328	3.93	
2/15/2013	13:32:00	14.671	14.446	0.225	0.519	2.16	-0.339	4.07	
2/15/2013	13:47:00	14.666	14.442	0.224	0.517	2.16	-0.337	4.04	
2/15/2013	14:02:00	14.663	14.440	0.223	0.514	2.16	-0.334	4.01	
2/15/2013	14:17:00	14.656	14.436	0.220	0.508	2.16	-0.328	3.93	
2/15/2013	14:32:00	14.655	14.435	0.220	0.508	2.16	-0.328	3.93	
2/15/2013	14:47:00	14.654	14.429	0.225	0.519	2.16	-0.339	4.07	
2/15/2013	15:02:00	14.645	14.434	0.211	0.487	2.16	-0.307	3.68	
2/15/2013	15:17:00	14.648	14.428	0.220	0.508	2.16	-0.328	3.93	
2/15/2013	15:32:00	14.641	14.431	0.210	0.484	2.16	-0.304	3.65	
2/15/2013	15:47:00	14.638	14.428	0.210	0.484	2.16	-0.304	3.65	
2/15/2013	16:02:00	14.633	14.431	0.202	0.466	2.16	-0.286	3.43	
2/15/2013	16:17:00	14.630	14.426	0.204	0.471	2.16	-0.291	3.49	
2/15/2013	16:32:00	14.649	14.427	0.222	0.512	2.16	-0.332	3.99	
2/15/2013	16:47:00	14.629	14.424	0.205	0.473	2.16	-0.293	3.52	
2/15/2013	17:02:00	14.643	14.431	0.212	0.489	2.16	-0.309	3.71	
2/15/2013	17:17:00	14.623	14.434	0.189	0.436	2.16	-0.256	3.07	
2/15/2013	17:32:00	14.631	14.435	0.196	0.452	2.16	-0.272	3.27	
2/15/2013	17:47:00	14.616	14.434	0.182	0.420	2.16	-0.240	2.88	
2/15/2013	18:02:00	14.621	14.433	0.188	0.434	2.16	-0.254	3.04	
2/15/2013	18:17:00	14.635	14.435	0.200	0.461	2.16	-0.281	3.38	
2/15/2013	18:32:00	14.633	14.434	0.199	0.459	2.16	-0.279	3.35	
2/15/2013	18:47:00	14.633	14.429	0.204	0.471	2.16	-0.291	3.49	
2/15/2013	19:02:00	14.631	14.433	0.198	0.457	2.16	-0.277	3.32	
2/15/2013	19:17:00	14.635	14.433	0.202	0.466	2.16	-0.286	3.43	
2/15/2013	19:32:00	14.630	14.434	0.196	0.452	2.16	-0.272	3.27	
2/15/2013	19:47:00	14.635	14.435	0.200	0.461	2.16	-0.281	3.38	
2/15/2013	20:02:00	14.632	14.434	0.198	0.457	2.16	-0.277	3.32	
2/15/2013	20:17:00	14.632	14.431	0.201	0.464	2.16	-0.284	3.40	
2/15/2013	20:32:00	14.628	14.430	0.198	0.457	2.16	-0.277	3.32	
2/15/2013	20:47:00	14.627	14.432	0.195	0.450	2.16	-0.270	3.24	
2/15/2013	21:02:00	14.628	14.435	0.193	0.445	2.16	-0.265	3.18	
2/15/2013	21:17:00	14.627	14.428	0.199	0.459	2.16	-0.279	3.35	
2/15/2013	21:32:00	14.629	14.429	0.200	0.461	2.16	-0.281	3.38	
2/15/2013	21:47:00	14.627	14.426	0.201	0.464	2.16	-0.284	3.40	
2/15/2013	22:02:00	14.627	14.434	0.193	0.445	2.16	-0.265	3.18	
2/15/2013	22:17:00	14.625	14.432	0.193	0.445	2.16	-0.265	3.18	
2/15/2013	22:32:00	14.626	14.423	0.203	0.468	2.16	-0.288	3.46	
2/15/2013	22:47:00	14.622	14.428	0.194	0.448	2.16	-0.268	3.21	
2/15/2013	23:02:00	14.620	14.433	0.187	0.431	2.16	-0.251	3.02	
2/15/2013	23:17:00	14.630	14.428	0.202	0.466	2.16	-0.286	3.43	
2/15/2013	23:32:00	14.627	14.424	0.203	0.468	2.16	-0.288	3.46	
2/15/2013	23:47:00	14.623	14.433	0.190	0.438	2.16	-0.258	3.10	
2/16/2013	0:02:00	14.623	14.433	0.190	0.438	2.16	-0.258	3.10	
2/16/2013	0:17:00	14.626	14.439	0.187	0.431	2.16	-0.251	3.02	
2/16/2013	0:32:00	14.624	14.433	0.191	0.441	2.16	-0.261	3.13	
2/16/2013	0:47:00	14.626	14.435	0.191	0.441	2.16	-0.261	3.13	
2/16/2013	1:02:00	14.624	14.432	0.192	0.443	2.16	-0.263	3.16	
2/16/2013	1:17:00	14.629	14.430	0.199	0.459	2.16	-0.279	3.35	
2/16/2013	1:32:00	14.625	14.433	0.192	0.443	2.16	-0.263	3.16	
2/16/2013	1:47:00	14.627	14.433	0.194	0.448	2.16	-0.268	3.21	
2/16/2013	2:02:00	14.630	14.427	0.203	0.468	2.16	-0.288	3.46	
2/16/2013	2:17:00	14.628	14.441	0.187	0.431	2.16	-0.251	3.02	
2/16/2013	2:32:00	14.626	14.417	0.209	0.482	2.16	-0.302	3.63	
2/16/2013	2:47:00	14.631	14.432	0.199	0.459	2.16	-0.279	3.35	
2/16/2013	3:02:00	14.623	14.422	0.201	0.464	2.16	-0.284	3.40	
2/16/2013	3:17:00	14.621	14.423	0.198	0.457	2.16	-0.277	3.32	
2/16/2013	3:32:00	14.619	14.423	0.196	0.452	2.16	-0.272	3.27	
2/16/2013	3:47:00	14.617	14.425	0.192	0.443	2.16	-0.263	3.16	
2/16/2013	4:02:00	14.616	14.425	0.191	0.441	2.16	-0.261	3.13	
2/16/2013	4:17:00	14.610	14.425	0.185	0.427	2.16	-0.247	2.96	
2/16/2013	4:32:00	14.611	14.430	0.181	0.418	2.16	-0.238	2.85	
2/16/2013	4:47:00	14.613	14.430	0.183	0.422	2.16	-0.242	2.91	
2/16/2013	5:02:00	14.615	14.427	0.188	0.434	2.16	-0.254	3.04	
2/16/2013	5:17:00	14.618	14.423	0.195	0.450	2.16	-0.270	3.24	
2/16/2013	5:32:00	14.616	14.427	0.189	0.436	2.16	-0.256	3.07	
2/16/2013	5:47:00	14.618	14.433	0.185	0.427	2.16	-0.247	2.96	
2/16/2013	6:02:00	14.624	14.436	0.188	0.434	2.16	-0.254	3.04	
2/16/2013	6:17:00	14.616	14.433	0.183	0.422	2.16	-0.242	2.91	0.01
2/16/2013	6:32:00	14.617	14.437	0.180	0.415	2.16	-0.235	2.82	
2/16/2013	6:47:00	14.619	14.435	0.184	0.424	2.16	-0.244	2.93	
2/16/2013	7:02:00	14.630	14.435	0.195	0.450	2.16	-0.270	3.24	
2/16/2013	7:17:00	14.626	14.440	0.186	0.429	2.16	-0.249	2.99	0.03
2/16/2013	7:32:00	14.627	14.434	0.193	0.445	2.16	-0.265	3.18	0.05
2/16/2013	7:47:00	14.637	14.438	0.199	0.459	2.16	-0.279	3.35	0.06
2/16/2013	8:02:00	14.629	14.435	0.194	0.448	2.16	-0.268	3.21	0.07
2/16/2013	8:17:00	14.641	14.434	0.207	0.478	2.16	-0.298	3.57	
2/16/2013	8:32:00	14.646	14.438	0.208	0.480	2.16	-0.300	3.60	0.08
2/16/2013	8:47:00	14.642	14.438	0.204	0.471	2.16	-0.291	3.49	
2/16/2013	9:02:00	14.647	14.437	0.210	0.484	2.16	-0.304	3.65	0.09
2/16/2013	9:17:00	14.645	14.436	0.209	0.482	2.16	-0.302	3.63	
2/16/2013	9:32:00	14.645	14.431	0.214	0.494	2.16	-0.314	3.76	0.10
2/16/2013	9:47:00	14.654	14.433	0.221	0.510	2.16	-0.330	3.96	0.11

2/16/2013	10:02:00	14.657	14.433	0.224	0.517	2.16	-0.337	4.04	0.12
2/16/2013	10:17:00	14.660	14.430	0.230	0.531	2.16	-0.351	4.21	0.13
2/16/2013	10:32:00	14.670	14.426	0.244	0.563	2.16	-0.383	4.59	0.14
2/16/2013	10:47:00	14.669	14.429	0.240	0.554	2.16	-0.374	4.48	
2/16/2013	11:02:00	14.674	14.420	0.254	0.586	2.16	-0.406	4.87	
2/16/2013	11:17:00	14.674	14.415	0.259	0.598	2.16	-0.418	5.01	
2/16/2013	11:32:00	14.673	14.411	0.262	0.604	2.16	-0.424	5.09	0.15
2/16/2013	11:47:00	14.671	14.406	0.265	0.611	2.16	-0.431	5.18	
2/16/2013	12:02:00	14.670	14.407	0.263	0.607	2.16	-0.427	5.12	0.16
2/16/2013	12:17:00	14.665	14.395	0.270	0.623	2.16	-0.443	5.31	
2/16/2013	12:32:00	14.662	14.402	0.260	0.600	2.16	-0.420	5.04	
2/16/2013	12:47:00	14.665	14.394	0.271	0.625	2.16	-0.445	5.34	0.17
2/16/2013	13:02:00	14.665	14.388	0.277	0.639	2.16	-0.459	5.51	
2/16/2013	13:17:00	14.657	14.379	0.278	0.641	2.16	-0.461	5.54	
2/16/2013	13:32:00	14.657	14.385	0.272	0.628	2.16	-0.448	5.37	
2/16/2013	13:47:00	14.652	14.386	0.266	0.614	2.16	-0.434	5.20	
2/16/2013	14:02:00	14.643	14.384	0.259	0.598	2.16	-0.418	5.01	
2/16/2013	14:17:00	14.639	14.378	0.261	0.602	2.16	-0.422	5.07	
2/16/2013	14:32:00	14.633	14.379	0.254	0.586	2.16	-0.406	4.87	
2/16/2013	14:47:00	14.631	14.383	0.248	0.572	2.16	-0.392	4.71	
2/16/2013	15:02:00	14.634	14.389	0.245	0.565	2.16	-0.385	4.62	
2/16/2013	15:17:00	14.635	14.369	0.266	0.614	2.16	-0.434	5.20	
2/16/2013	15:32:00	14.626	14.378	0.248	0.572	2.16	-0.392	4.71	
2/16/2013	15:47:00	14.623	14.383	0.240	0.554	2.16	-0.374	4.48	
2/16/2013	16:02:00	14.621	14.379	0.242	0.558	2.16	-0.378	4.54	
2/16/2013	16:17:00	14.619	14.379	0.240	0.554	2.16	-0.374	4.48	
2/16/2013	16:32:00	14.618	14.384	0.234	0.540	2.16	-0.360	4.32	
2/16/2013	16:47:00	14.617	14.385	0.232	0.535	2.16	-0.355	4.26	
2/16/2013	17:02:00	14.614	14.384	0.230	0.531	2.16	-0.351	4.21	
2/16/2013	17:17:00	14.618	14.389	0.229	0.528	2.16	-0.348	4.18	
2/16/2013	17:32:00	14.614	14.397	0.217	0.501	2.16	-0.321	3.85	
2/16/2013	17:47:00	14.613	14.404	0.209	0.482	2.16	-0.302	3.63	
2/16/2013	18:02:00	14.618	14.402	0.216	0.498	2.16	-0.318	3.82	
2/16/2013	18:17:00	14.623	14.411	0.212	0.489	2.16	-0.309	3.71	0.18
2/16/2013	18:32:00	14.625	14.412	0.213	0.491	2.16	-0.311	3.74	
2/16/2013	18:47:00	14.633	14.420	0.213	0.491	2.16	-0.311	3.74	0.20
2/16/2013	19:02:00	14.644	14.419	0.225	0.519	2.16	-0.339	4.07	
2/16/2013	19:17:00	14.655	14.421	0.234	0.540	2.16	-0.360	4.32	
2/16/2013	19:32:00	14.662	14.423	0.239	0.551	2.16	-0.371	4.46	
2/16/2013	19:47:00	14.663	14.427	0.236	0.544	2.16	-0.364	4.37	
2/16/2013	20:02:00	14.663	14.426	0.237	0.547	2.16	-0.367	4.40	
2/16/2013	20:17:00	14.667	14.435	0.232	0.535	2.16	-0.355	4.26	
2/16/2013	20:32:00	14.671	14.436	0.235	0.542	2.16	-0.362	4.35	
2/16/2013	20:47:00	14.674	14.439	0.235	0.542	2.16	-0.362	4.35	
2/16/2013	21:02:00	14.678	14.442	0.236	0.544	2.16	-0.364	4.37	
2/16/2013	21:17:00	14.682	14.437	0.245	0.565	2.16	-0.385	4.62	
2/16/2013	21:32:00	14.682	14.446	0.236	0.544	2.16	-0.364	4.37	
2/16/2013	21:47:00	14.684	14.442	0.242	0.558	2.16	-0.378	4.54	
2/16/2013	22:02:00	14.690	14.448	0.242	0.558	2.16	-0.378	4.54	
2/16/2013	22:17:00	14.691	14.447	0.244	0.563	2.16	-0.383	4.59	
2/16/2013	22:32:00	14.689	14.454	0.235	0.542	2.16	-0.362	4.35	
2/16/2013	22:47:00	14.692	14.451	0.241	0.556	2.16	-0.376	4.51	
2/16/2013	23:02:00	14.692	14.458	0.234	0.540	2.16	-0.360	4.32	
2/16/2013	23:17:00	14.692	14.457	0.235	0.542	2.16	-0.362	4.35	
2/16/2013	23:32:00	14.687	14.459	0.228	0.526	2.16	-0.346	4.15	
2/16/2013	23:47:00	14.692	14.458	0.234	0.540	2.16	-0.360	4.32	
2/17/2013	0:02:00	14.691	14.460	0.231	0.533	2.16	-0.353	4.24	
2/17/2013	0:17:00	14.694	14.465	0.229	0.528	2.16	-0.348	4.18	
2/17/2013	0:32:00	14.695	14.468	0.227	0.524	2.16	-0.344	4.12	
2/17/2013	0:47:00	14.692	14.463	0.229	0.528	2.16	-0.348	4.18	
2/17/2013	1:02:00	14.696	14.465	0.231	0.533	2.16	-0.353	4.24	
2/17/2013	1:17:00	14.695	14.467	0.228	0.526	2.16	-0.346	4.15	
2/17/2013	1:32:00	14.698	14.467	0.231	0.533	2.16	-0.353	4.24	
2/17/2013	1:47:00	14.695	14.471	0.224	0.517	2.16	-0.337	4.04	
2/17/2013	2:02:00	14.697	14.471	0.226	0.521	2.16	-0.341	4.10	
2/17/2013	2:17:00	14.701	14.474	0.227	0.524	2.16	-0.344	4.12	
2/17/2013	2:32:00	14.694	14.480	0.214	0.494	2.16	-0.314	3.76	
2/17/2013	2:47:00	14.696	14.478	0.218	0.503	2.16	-0.323	3.88	
2/17/2013	3:02:00	14.701	14.483	0.218	0.503	2.16	-0.323	3.88	
2/17/2013	3:17:00	14.701	14.482	0.219	0.505	2.16	-0.325	3.90	
2/17/2013	3:32:00	14.700	14.487	0.213	0.491	2.16	-0.311	3.74	
2/17/2013	3:47:00	14.698	14.492	0.206	0.475	2.16	-0.295	3.54	
2/17/2013	4:02:00	14.699	14.492	0.207	0.478	2.16	-0.298	3.57	
2/17/2013	4:17:00	14.701	14.495	0.206	0.475	2.16	-0.295	3.54	
2/17/2013	4:32:00	14.700	14.499	0.201	0.464	2.16	-0.284	3.40	
2/17/2013	4:47:00	14.703	14.500	0.203	0.468	2.16	-0.288	3.46	
2/17/2013	5:02:00	14.709	14.502	0.207	0.478	2.16	-0.298	3.57	
2/17/2013	5:17:00	14.708	14.506	0.202	0.466	2.16	-0.286	3.43	
2/17/2013	5:32:00	14.720	14.511	0.209	0.482	2.16	-0.302	3.63	
2/17/2013	5:47:00	14.721	14.510	0.211	0.487	2.16	-0.307	3.68	
2/17/2013	6:02:00	14.722	14.515	0.207	0.478	2.16	-0.298	3.57	
2/17/2013	6:17:00	14.724	14.519	0.205	0.473	2.16	-0.293	3.52	
2/17/2013	6:32:00	14.722	14.519	0.203	0.468	2.16	-0.288	3.46	
2/17/2013	6:47:00	14.729	14.519	0.210	0.484	2.16	-0.304	3.65	
2/17/2013	7:02:00	14.722	14.534	0.188	0.434	2.16	-0.254	3.04	
2/17/2013	7:17:00	14.731	14.531	0.200	0.461	2.16	-0.281	3.38	
2/17/2013	7:32:00	14.733	14.536	0.197	0.454	2.16	-0.274	3.29	
2/17/2013	7:47:00	14.735	14.533	0.202	0.466	2.16	-0.286	3.43	
2/17/2013	8:02:00	14.742	14.537	0.205	0.473	2.16	-0.293	3.52	
2/17/2013	8:17:00	14.745	14.536	0.209	0.482	2.16	-0.302	3.63	
2/17/2013	8:32:00	14.749	14.542	0.207	0.478	2.16	-0.298	3.57	
2/17/2013	8:47:00	14.747	14.542	0.205	0.473	2.16	-0.293	3.52	
2/17/2013	9:02:00	14.751	14.535	0.216	0.498	2.16	-0.318	3.82	
2/17/2013	9:17:00	14.750	14.546	0.204	0.471	2.16	-0.291	3.49	
2/17/2013	9:32:00	14.753	14.553	0.200	0.461	2.16	-0.281	3.38	
2/17/2013	9:47:00	14.753	14.552	0.201	0.464	2.16	-0.284	3.40	
2/17/2013	10:02:00	14.757	14.546	0.211	0.487	2.16	-0.307	3.68	0.01
2/17/2013	10:17:00	14.761	14.542	0.219	0.505	2.16	-0.325	3.90	
2/17/2013	10:32:00	14.759	14.542	0.217	0.501	2.16	-0.321	3.85	
2/17/2013	10:47:00	14.756	14.547	0.209	0.482	2.16	-0.302	3.63	0.02
2/17/2013	11:02:00	14.758	14.542	0.216	0.498	2.16	-0.318	3.82	
2/17/2013	11:17:00	14.765	14.537	0.228	0.526	2.16	-0.346	4.15	0.03
2/17/2013	11:32:00	14.765	14.538	0.227	0.524	2.16	-0.344	4.12	
2/17/2013	11:47:00	14.764	14.534	0.230	0.531	2.16	-0.351	4.21	
2/17/2013	12:02:00	14.768	14.535	0.233	0.538	2.16	-0.358	4.29	
2/17/2013	12:17:00	14.765	14.533	0.232	0.535	2.16	-0.355	4.26	
2/17/2013	12:32:00	14.760	14.528	0.232	0.535	2.16	-0.355	4.26	
2/17/2013	12:47:00	14.757	14.527	0.230	0.531	2.16	-0.351	4.21	
2/17/2013	13:02:00	14.758	14.524	0.234	0.540	2.16	-0.360	4.32	
2/17/2013	13:17:00	14.755	14.533	0.222	0.512	2.16	-0.332	3.99	
2/17/2013	13:32:00	14.754	14.527	0.227	0.524	2.16	-0.344	4.12	
2/17/2013	13:47:00	14.751	14.527	0.224	0.517	2.16	-0.337	4.04	
2/17/2013	14:02:00	14.753	14.519	0.234	0.540	2.16	-0.360	4.32	
2/17/2013	14:17:00	14.746	14.524	0.222	0.512	2.16	-0.332	3.99	
2/17/2013	14:32:00	14.749	14.527	0.222	0.512	2.16	-0.332	3.99	
2/17/2013	14:47:00	14.750	14.528	0.222	0.512	2.16	-0.332	3.99	
2/17/2013	15:02:00	14.743	14.527	0.216	0.498	2.16	-0.318	3.82	
2/17/2013	15:17:00	14.747	14.527	0.220	0.508	2.16	-0.328	3.93	
2/17/2013	15:32:00	14.747	14.527	0.220	0.508	2.16	-0.328	3.93	
2/17/2013	15:47:00	14.745	14.528	0.217	0.501	2.16	-0.321	3.85	
2/17/2013	16:02:00	14.742	14.529	0.213	0.491	2.16	-0.311	3.74	
2/17/2013	16:17:00	14.746	14.532	0.214	0.494	2.16	-0.314	3.76	
2/17/2013	16:32:00	14.745	14.533	0.212	0.489	2.16	-0.309	3.71	
2/17/2013	16:47:00	14.750	14.547	0.203	0.468	2.16	-0.288	3.46	
2/17/2013	17:02:00	14.746	14.541	0.205	0.473	2.16	-0.293	3.52	
2/17/2013	17:17:00	14.747	14.545	0.202	0.466	2.16	-0.286	3.43	
2/17/2013	17:32:00	14.748	14.545	0.203	0.468	2.16	-0.288	3.46	
2/17/2013	17:47:00	14.747	14.547	0.200	0.461	2.16	-0.281	3.38	
2/17/2013	18:02:00	14.754	14.548	0.206	0.475	2.16	-0.295	3.54	
2/17/2013	18:17:00	14.761	14.552	0.209	0.482	2.16	-0.302	3.63	
2/17/2013	18:32:00	14.761	14.560	0.201	0.464	2.16	-0.284	3.40	
2/17/2013	18:47:00	14.758	14.562	0.196	0.452	2.16	-0.272	3.27	
2/17/2013	19:02:00	14.759	14.560	0.199	0.459	2.16	-0.279	3.35	

2/17/2013	19:17:00	14.763	14.562	0.201	0.464	2.16	-0.284	3.40
2/17/2013	19:32:00	14.769	14.568	0.201	0.464	2.16	-0.284	3.40
2/17/2013	19:47:00	14.770	14.566	0.204	0.471	2.16	-0.291	3.49
2/17/2013	20:02:00	14.769	14.568	0.201	0.464	2.16	-0.284	3.40
2/17/2013	20:17:00	14.771	14.570	0.201	0.464	2.16	-0.284	3.40
2/17/2013	20:32:00	14.775	14.576	0.199	0.459	2.16	-0.279	3.35
2/17/2013	20:47:00	14.773	14.577	0.196	0.452	2.16	-0.272	3.27
2/17/2013	21:02:00	14.779	14.580	0.199	0.459	2.16	-0.279	3.35
2/17/2013	21:17:00	14.782	14.586	0.196	0.452	2.16	-0.272	3.27
2/17/2013	21:32:00	14.779	14.590	0.189	0.436	2.16	-0.256	3.07
2/17/2013	21:47:00	14.787	14.589	0.198	0.457	2.16	-0.277	3.32
2/17/2013	22:02:00	14.785	14.592	0.193	0.445	2.16	-0.265	3.18
2/17/2013	22:17:00	14.783	14.592	0.191	0.441	2.16	-0.261	3.13
2/17/2013	22:32:00	14.793	14.595	0.198	0.457	2.16	-0.277	3.32
2/17/2013	22:47:00	14.790	14.595	0.195	0.450	2.16	-0.270	3.24
2/17/2013	23:02:00	14.796	14.596	0.200	0.461	2.16	-0.281	3.38
2/17/2013	23:17:00	14.797	14.594	0.203	0.468	2.16	-0.288	3.46
2/17/2013	23:32:00	14.801	14.599	0.202	0.466	2.16	-0.286	3.43
2/17/2013	23:47:00	14.797	14.599	0.198	0.457	2.16	-0.277	3.32
2/18/2013	0:02:00	14.800	14.598	0.202	0.466	2.16	-0.286	3.43
2/18/2013	0:17:00	14.802	14.604	0.198	0.457	2.16	-0.277	3.32
2/18/2013	0:32:00	14.805	14.605	0.200	0.461	2.16	-0.281	3.38
2/18/2013	0:47:00	14.803	14.606	0.197	0.454	2.16	-0.274	3.29
2/18/2013	1:02:00	14.806	14.605	0.201	0.464	2.16	-0.284	3.40
2/18/2013	1:17:00	14.801	14.610	0.191	0.441	2.16	-0.261	3.13
2/18/2013	1:32:00	14.805	14.614	0.191	0.441	2.16	-0.261	3.13
2/18/2013	1:47:00	14.807	14.612	0.195	0.450	2.16	-0.270	3.24
2/18/2013	2:02:00	14.809	14.617	0.192	0.443	2.16	-0.263	3.16
2/18/2013	2:17:00	14.809	14.614	0.195	0.450	2.16	-0.270	3.24
2/18/2013	2:32:00	14.809	14.611	0.198	0.457	2.16	-0.277	3.32
2/18/2013	2:47:00	14.814	14.614	0.200	0.461	2.16	-0.281	3.38
2/18/2013	3:02:00	14.814	14.616	0.198	0.457	2.16	-0.277	3.32
2/18/2013	3:17:00	14.815	14.617	0.198	0.457	2.16	-0.277	3.32
2/18/2013	3:32:00	14.812	14.621	0.191	0.441	2.16	-0.261	3.13
2/18/2013	3:47:00	14.814	14.624	0.190	0.438	2.16	-0.258	3.10
2/18/2013	4:02:00	14.811	14.626	0.185	0.427	2.16	-0.247	2.96
2/18/2013	4:17:00	14.815	14.629	0.186	0.429	2.16	-0.249	2.99
2/18/2013	4:32:00	14.815	14.632	0.183	0.422	2.16	-0.242	2.91
2/18/2013	4:47:00	14.822	14.631	0.191	0.441	2.16	-0.261	3.13
2/18/2013	5:02:00	14.817	14.634	0.183	0.422	2.16	-0.242	2.91
2/18/2013	5:17:00	14.820	14.640	0.180	0.415	2.16	-0.235	2.82
2/18/2013	5:32:00	14.825	14.640	0.185	0.427	2.16	-0.247	2.96
2/18/2013	5:47:00	14.828	14.641	0.187	0.431	2.16	-0.251	3.02
2/18/2013	6:02:00	14.832	14.646	0.186	0.429	2.16	-0.249	2.99
2/18/2013	6:17:00	14.832	14.651	0.181	0.418	2.16	-0.238	2.85
2/18/2013	6:32:00	14.832	14.653	0.179	0.413	2.16	-0.233	2.80
2/18/2013	6:47:00	14.834	14.658	0.176	0.406	2.16	-0.226	2.71
2/18/2013	7:02:00	14.840	14.640	0.200	0.461	2.16	-0.281	3.38
2/18/2013	7:17:00	14.839	14.655	0.184	0.424	2.16	-0.244	2.93
2/18/2013	7:32:00	14.839	14.645	0.194	0.448	2.16	-0.268	3.21
2/18/2013	7:47:00	14.842	14.648	0.194	0.448	2.16	-0.268	3.21
2/18/2013	8:02:00	14.846	14.651	0.195	0.450	2.16	-0.270	3.24
2/18/2013	8:17:00	14.849	14.645	0.204	0.471	2.16	-0.291	3.49
2/18/2013	8:32:00	14.850	14.647	0.203	0.468	2.16	-0.288	3.46
2/18/2013	8:47:00	14.851	14.652	0.199	0.459	2.16	-0.279	3.35
2/18/2013	9:02:00	14.850	14.653	0.197	0.454	2.16	-0.274	3.29
2/18/2013	9:17:00	14.847	14.644	0.203	0.468	2.16	-0.288	3.46
2/18/2013	9:32:00	14.851	14.647	0.204	0.471	2.16	-0.291	3.49
2/18/2013	9:47:00	14.852	14.646	0.206	0.475	2.16	-0.295	3.54
2/18/2013	10:02:00	14.850	14.642	0.208	0.480	2.16	-0.300	3.60
2/18/2013	10:17:00	14.851	14.645	0.206	0.475	2.16	-0.295	3.54
2/18/2013	10:32:00	14.854	14.638	0.216	0.498	2.16	-0.318	3.82
2/18/2013	10:47:00	14.853	14.639	0.214	0.494	2.16	-0.314	3.76
2/18/2013	11:02:00	14.851	14.634	0.217	0.501	2.16	-0.321	3.85
2/18/2013	11:17:00	14.854	14.634	0.220	0.508	2.16	-0.328	3.93
2/18/2013	11:32:00	14.848	14.623	0.225	0.519	2.16	-0.339	4.07
2/18/2013	11:47:00	14.843	14.623	0.220	0.508	2.16	-0.328	3.93
2/18/2013	12:02:00	14.845	14.615	0.230	0.531	2.16	-0.351	4.21
2/18/2013	12:17:00	14.836	14.608	0.228	0.526	2.16	-0.346	4.15
2/18/2013	12:32:00	14.834	14.608	0.226	0.521	2.16	-0.341	4.10
2/18/2013	12:47:00	14.830	14.609	0.221	0.510	2.16	-0.330	3.96
2/18/2013	13:02:00	14.824	14.615	0.209	0.482	2.16	-0.302	3.63
2/18/2013	13:17:00	14.821	14.607	0.214	0.494	2.16	-0.314	3.76
2/18/2013	13:32:00	14.816	14.604	0.212	0.489	2.16	-0.309	3.71
2/18/2013	13:47:00	14.814	14.604	0.210	0.484	2.16	-0.304	3.65
2/18/2013	14:02:00	14.813	14.599	0.214	0.494	2.16	-0.314	3.76
2/18/2013	14:17:00	14.812	14.597	0.215	0.496	2.16	-0.316	3.79
2/18/2013	14:32:00	14.806	14.596	0.210	0.484	2.16	-0.304	3.65
2/18/2013	14:47:00	14.804	14.593	0.211	0.487	2.16	-0.307	3.68
2/18/2013	15:02:00	14.803	14.591	0.212	0.489	2.16	-0.309	3.71
2/18/2013	15:17:00	14.806	14.594	0.212	0.489	2.16	-0.309	3.71
2/18/2013	15:32:00	14.803	14.590	0.213	0.491	2.16	-0.311	3.74
2/18/2013	15:47:00	14.801	14.589	0.212	0.489	2.16	-0.309	3.71
2/18/2013	16:02:00	14.798	14.590	0.208	0.480	2.16	-0.300	3.60
2/18/2013	16:17:00	14.793	14.594	0.199	0.459	2.16	-0.279	3.35
2/18/2013	16:32:00	14.795	14.594	0.201	0.464	2.16	-0.284	3.40
2/18/2013	16:47:00	14.797	14.593	0.204	0.471	2.16	-0.291	3.49
2/18/2013	17:02:00	14.793	14.600	0.193	0.445	2.16	-0.265	3.18
2/18/2013	17:17:00	14.791	14.594	0.197	0.454	2.16	-0.274	3.29
2/18/2013	17:32:00	14.794	14.594	0.200	0.461	2.16	-0.281	3.38
2/18/2013	17:47:00	14.795	14.596	0.199	0.459	2.16	-0.279	3.35
2/18/2013	18:02:00	14.796	14.591	0.205	0.473	2.16	-0.293	3.52
2/18/2013	18:17:00	14.795	14.590	0.205	0.473	2.16	-0.293	3.52
2/18/2013	18:32:00	14.795	14.583	0.212	0.489	2.16	-0.309	3.71
2/18/2013	18:47:00	14.791	14.593	0.198	0.457	2.16	-0.277	3.32
2/18/2013	19:02:00	14.797	14.595	0.202	0.466	2.16	-0.286	3.43
2/18/2013	19:17:00	14.796	14.591	0.205	0.473	2.16	-0.293	3.52
2/18/2013	19:32:00	14.796	14.588	0.208	0.480	2.16	-0.300	3.60
2/18/2013	19:47:00	14.792	14.591	0.201	0.464	2.16	-0.284	3.40
2/18/2013	20:02:00	14.794	14.578	0.216	0.498	2.16	-0.318	3.82
2/18/2013	20:17:00	14.794	14.601	0.193	0.445	2.16	-0.265	3.18
2/18/2013	20:32:00	14.787	14.596	0.191	0.441	2.16	-0.261	3.13
2/18/2013	20:47:00	14.792	14.579	0.213	0.491	2.16	-0.311	3.74
2/18/2013	21:02:00	14.789	14.587	0.202	0.466	2.16	-0.286	3.43
2/18/2013	21:17:00	14.787	14.591	0.196	0.452	2.16	-0.272	3.27
2/18/2013	21:32:00	14.784	14.604	0.180	0.415	2.16	-0.235	2.82
2/18/2013	21:47:00	14.784	14.602	0.182	0.420	2.16	-0.240	2.88
2/18/2013	22:02:00	14.783	14.583	0.200	0.461	2.16	-0.281	3.38
2/18/2013	22:17:00	14.785	14.580	0.205	0.473	2.16	-0.293	3.52
2/18/2013	22:32:00	14.789	14.579	0.210	0.484	2.16	-0.304	3.65
2/18/2013	22:47:00	14.786	14.579	0.207	0.478	2.16	-0.298	3.57
2/18/2013	23:02:00	14.785	14.575	0.210	0.484	2.16	-0.304	3.65
2/18/2013	23:17:00	14.779	14.572	0.207	0.478	2.16	-0.298	3.57
2/18/2013	23:32:00	14.776	14.568	0.208	0.480	2.16	-0.300	3.60
2/18/2013	23:47:00	14.775	14.573	0.202	0.466	2.16	-0.286	3.43
2/19/2013	0:02:00	14.769	14.575	0.194	0.448	2.16	-0.268	3.21
2/19/2013	0:17:00	14.771	14.572	0.199	0.459	2.16	-0.279	3.35
2/19/2013	0:32:00	14.769	14.566	0.203	0.468	2.16	-0.288	3.46
2/19/2013	0:47:00	14.767	14.566	0.201	0.464	2.16	-0.284	3.40
2/19/2013	1:02:00	14.772	14.563	0.209	0.482	2.16	-0.302	3.63
2/19/2013	1:17:00	14.767	14.553	0.214	0.494	2.16	-0.314	3.76
2/19/2013	1:32:00	14.768	14.546	0.222	0.512	2.16	-0.332	3.99
2/19/2013	1:47:00	14.758	14.543	0.215	0.496	2.16	-0.316	3.79
2/19/2013	2:02:00	14.755	14.538	0.217	0.501	2.16	-0.321	3.85
2/19/2013	2:17:00	14.748	14.537	0.211	0.487	2.16	-0.307	3.68
2/19/2013	2:32:00	14.745	14.535	0.210	0.484	2.16	-0.304	3.65
2/19/2013	2:47:00	14.741	14.529	0.212	0.489	2.16	-0.309	3.71
2/19/2013	3:02:00	14.737	14.525	0.212	0.489	2.16	-0.309	3.71
2/19/2013	3:17:00	14.734	14.526	0.208	0.480	2.16	-0.300	3.60
2/19/2013	3:32:00	14.732	14.522	0.210	0.484	2.16	-0.304	3.65
2/19/2013	3:47:00	14.735	14.516	0.219	0.505	2.16	-0.325	3.90
2/19/2013	4:02:00	14.723	14.522	0.201	0.464	2.16	-0.284	3.40
2/19/2013	4:17:00	14.721	14.517	0.204	0.471	2.16	-0.291	3.49

2/19/2013	4:32:00	14.719	14.516	0.203	0.468	2.16	-0.288	3.46		
2/19/2013	4:47:00	14.714	14.514	0.200	0.461	2.16	-0.281	3.38		
2/19/2013	5:02:00	14.712	14.513	0.199	0.459	2.16	-0.279	3.35		
2/19/2013	5:17:00	14.712	14.521	0.191	0.441	2.16	-0.261	3.13		
2/19/2013	5:32:00	14.708	14.516	0.192	0.443	2.16	-0.263	3.16		
2/19/2013	5:47:00	14.715	14.519	0.196	0.452	2.16	-0.272	3.27		
2/19/2013	6:02:00	14.707	14.514	0.193	0.445	2.16	-0.265	3.18		
2/19/2013	6:17:00	14.710	14.509	0.201	0.464	2.16	-0.284	3.40		
2/19/2013	6:32:00	14.707	14.504	0.203	0.468	2.16	-0.288	3.46		
2/19/2013	6:47:00	14.708	14.516	0.192	0.443	2.16	-0.263	3.16		
2/19/2013	7:02:00	14.713	14.514	0.199	0.459	2.16	-0.279	3.35		
2/19/2013	7:17:00	14.708	14.496	0.212	0.489	2.16	-0.309	3.71		
2/19/2013	7:32:00	14.701	14.503	0.198	0.457	2.16	-0.277	3.32		
2/19/2013	7:47:00	14.704	14.505	0.199	0.459	2.16	-0.279	3.35		
2/19/2013	8:02:00	14.698	14.507	0.191	0.441	2.16	-0.261	3.13		
2/19/2013	8:17:00	14.696	14.497	0.199	0.459	2.16	-0.279	3.35		
2/19/2013	8:32:00	14.692	14.501	0.191	0.441	2.16	-0.261	3.13	0.01	
2/19/2013	8:47:00	14.704	14.494	0.210	0.484	2.16	-0.304	3.65	0.03	
2/19/2013	9:02:00	14.702	14.492	0.210	0.484	2.16	-0.304	3.65	0.04	
2/19/2013	9:17:00	14.704	14.485	0.219	0.505	2.16	-0.325	3.90	0.08	
2/19/2013	9:32:00	14.702	14.480	0.222	0.512	2.16	-0.332	3.99		
2/19/2013	9:47:00	14.701	14.482	0.219	0.505	2.16	-0.325	3.90	0.10	
2/19/2013	10:02:00	14.705	14.477	0.228	0.526	2.16	-0.346	4.15		
2/19/2013	10:17:00	14.703	14.476	0.227	0.524	2.16	-0.344	4.12	0.12	
2/19/2013	10:32:00	14.696	14.466	0.230	0.531	2.16	-0.351	4.21	0.13	
2/19/2013	10:47:00	14.701	14.461	0.240	0.554	2.16	-0.374	4.48	0.14	
2/19/2013	11:02:00	14.703	14.461	0.242	0.558	2.16	-0.378	4.54		
2/19/2013	11:17:00	14.702	14.461	0.241	0.556	2.16	-0.376	4.51	0.16	
2/19/2013	11:32:00	14.697	14.460	0.237	0.547	2.16	-0.367	4.40		
2/19/2013	11:47:00	14.690	14.439	0.251	0.579	2.16	-0.399	4.79		
2/19/2013	12:02:00	14.692	14.444	0.248	0.572	2.16	-0.392	4.71	0.17	
2/19/2013	12:17:00	14.687	14.442	0.245	0.565	2.16	-0.385	4.62	0.18	
2/19/2013	12:32:00	14.684	14.443	0.241	0.556	2.16	-0.376	4.51	0.19	
2/19/2013	12:47:00	14.682	14.435	0.247	0.570	2.16	-0.390	4.68		
2/19/2013	13:02:00	14.683	14.430	0.253	0.584	2.16	-0.404	4.84		
2/19/2013	13:17:00	14.686	14.432	0.254	0.586	2.16	-0.406	4.87		
2/19/2013	13:32:00	14.687	14.423	0.264	0.609	2.16	-0.429	5.15		
2/19/2013	13:47:00	14.686	14.428	0.258	0.595	2.16	-0.415	4.98		
2/19/2013	14:02:00	14.691	14.417	0.274	0.632	2.16	-0.452	5.43		
2/19/2013	14:17:00	14.696	14.417	0.279	0.644	2.16	-0.464	5.56		
2/19/2013	14:32:00	14.686	14.412	0.274	0.632	2.16	-0.452	5.43		
2/19/2013	14:47:00	14.684	14.416	0.268	0.618	2.16	-0.438	5.26		
2/19/2013	15:02:00	14.676	14.411	0.265	0.611	2.16	-0.431	5.18		
2/19/2013	15:17:00	14.679	14.407	0.272	0.628	2.16	-0.448	5.37		
2/19/2013	15:32:00	14.670	14.410	0.260	0.600	2.16	-0.420	5.04		
2/19/2013	15:47:00	14.670	14.406	0.264	0.609	2.16	-0.429	5.15		
2/19/2013	16:02:00	14.669	14.406	0.263	0.607	2.16	-0.427	5.12		
2/19/2013	16:17:00	14.661	14.412	0.249	0.574	2.16	-0.394	4.73		
2/19/2013	16:32:00	14.659	14.413	0.246	0.568	2.16	-0.388	4.65		
2/19/2013	16:47:00	14.652	14.425	0.227	0.524	2.16	-0.344	4.12		
2/19/2013	17:02:00	14.659	14.425	0.234	0.540	2.16	-0.360	4.32		
2/19/2013	17:17:00	14.660	14.420	0.240	0.554	2.16	-0.374	4.48		
2/19/2013	17:32:00	14.657	14.426	0.231	0.533	2.16	-0.353	4.24		
2/19/2013	17:47:00	14.661	14.429	0.232	0.535	2.16	-0.355	4.26		
2/19/2013	18:02:00	14.659	14.430	0.229	0.528	2.16	-0.348	4.18		
2/19/2013	18:17:00	14.665	14.434	0.231	0.533	2.16	-0.353	4.24		
2/19/2013	18:32:00	14.661	14.442	0.219	0.505	2.16	-0.325	3.90		
2/19/2013	18:47:00	14.665	14.441	0.224	0.517	2.16	-0.337	4.04		
2/19/2013	19:02:00	14.669	14.425	0.244	0.563	2.16	-0.383	4.59		
2/19/2013	19:17:00	14.666	14.435	0.231	0.533	2.16	-0.353	4.24		
2/19/2013	19:32:00	14.669	14.439	0.230	0.531	2.16	-0.351	4.21		
2/19/2013	19:47:00	14.673	14.440	0.233	0.538	2.16	-0.358	4.29		
2/19/2013	20:02:00	14.674	14.442	0.232	0.535	2.16	-0.355	4.26		
2/19/2013	20:17:00	14.674	14.442	0.232	0.535	2.16	-0.355	4.26		
2/19/2013	20:32:00	14.671	14.447	0.224	0.517	2.16	-0.337	4.04		
2/19/2013	20:47:00	14.673	14.450	0.223	0.514	2.16	-0.334	4.01		
2/19/2013	21:02:00	14.670	14.453	0.217	0.501	2.16	-0.321	3.85		
2/19/2013	21:17:00	14.672	14.455	0.217	0.501	2.16	-0.321	3.85		
2/19/2013	21:32:00	14.674	14.454	0.220	0.508	2.16	-0.328	3.93		
2/19/2013	21:47:00	14.677	14.460	0.217	0.501	2.16	-0.321	3.85		
2/19/2013	22:02:00	14.677	14.457	0.220	0.508	2.16	-0.328	3.93		
2/19/2013	22:17:00	14.679	14.458	0.221	0.510	2.16	-0.330	3.96		
2/19/2013	22:32:00	14.678	14.460	0.218	0.503	2.16	-0.323	3.88		
2/19/2013	22:47:00	14.678	14.461	0.217	0.501	2.16	-0.321	3.85		
2/19/2013	23:02:00	14.682	14.464	0.218	0.503	2.16	-0.323	3.88		
2/19/2013	23:17:00	14.683	14.467	0.216	0.498	2.16	-0.318	3.82		
2/19/2013	23:32:00	14.684	14.465	0.219	0.505	2.16	-0.325	3.90		
2/19/2013	23:47:00	14.687	14.475	0.212	0.489	2.16	-0.309	3.71		
2/20/2013	0:02:00	14.683	14.478	0.205	0.473	2.16	-0.293	3.52		
2/20/2013	0:17:00	14.685	14.480	0.205	0.473	2.16	-0.293	3.52		
2/20/2013	0:32:00	14.687	14.478	0.209	0.482	2.16	-0.302	3.63		
2/20/2013	0:47:00	14.687	14.481	0.206	0.475	2.16	-0.295	3.54		
2/20/2013	1:02:00	14.697	14.477	0.220	0.508	2.16	-0.328	3.93		
2/20/2013	1:17:00	14.698	14.476	0.222	0.512	2.16	-0.332	3.99		
2/20/2013	1:32:00	14.694	14.477	0.217	0.501	2.16	-0.321	3.85		
2/20/2013	1:47:00	14.701	14.475	0.226	0.521	2.16	-0.341	4.10		
2/20/2013	2:02:00	14.700	14.477	0.223	0.514	2.16	-0.334	4.01		
2/20/2013	2:17:00	14.695	14.480	0.215	0.496	2.16	-0.316	3.79		
2/20/2013	2:32:00	14.694	14.482	0.212	0.489	2.16	-0.309	3.71		
2/20/2013	2:47:00	14.693	14.479	0.214	0.494	2.16	-0.314	3.76		
2/20/2013	3:02:00	14.694	14.482	0.212	0.489	2.16	-0.309	3.71		
2/20/2013	3:17:00	14.697	14.483	0.214	0.494	2.16	-0.314	3.76		
2/20/2013	3:32:00	14.697	14.488	0.209	0.482	2.16	-0.302	3.63		
2/20/2013	3:47:00	14.696	14.489	0.207	0.478	2.16	-0.298	3.57		
2/20/2013	4:02:00	14.698	14.491	0.207	0.478	2.16	-0.298	3.57		
2/20/2013	4:17:00	14.694	14.489	0.205	0.473	2.16	-0.293	3.52		
2/20/2013	4:32:00	14.698	14.492	0.206	0.475	2.16	-0.295	3.54		
2/20/2013	4:47:00	14.699	14.497	0.202	0.466	2.16	-0.286	3.43		
2/20/2013	5:02:00	14.700	14.495	0.205	0.473	2.16	-0.293	3.52		
2/20/2013	5:17:00	14.704	14.494	0.210	0.484	2.16	-0.304	3.65		
2/20/2013	5:32:00	14.706	14.497	0.209	0.482	2.16	-0.302	3.63		
2/20/2013	5:47:00	14.706	14.503	0.203	0.468	2.16	-0.288	3.46		
2/20/2013	6:02:00	14.704	14.505	0.199	0.459	2.16	-0.279	3.35		
2/20/2013	6:17:00	14.714	14.513	0.201	0.464	2.16	-0.284	3.40		
2/20/2013	6:32:00	14.710	14.511	0.199	0.459	2.16	-0.279	3.35		
2/20/2013	6:47:00	14.708	14.505	0.203	0.468	2.16	-0.288	3.46		
2/20/2013	7:02:00	14.718	14.511	0.207	0.478	2.16	-0.298	3.57		
2/20/2013	7:17:00	14.719	14.504	0.215	0.496	2.16	-0.316	3.79		
2/20/2013	7:32:00	14.726	14.527	0.199	0.459	2.16	-0.279	3.35		
2/20/2013	7:47:00	14.724	14.510	0.214	0.494	2.16	-0.314	3.76		
2/20/2013	8:02:00	14.719	14.509	0.210	0.484	2.16	-0.304	3.65		
2/20/2013	8:17:00	14.728	14.511	0.217	0.501	2.16	-0.321	3.85		
2/20/2013	8:32:00	14.719	14.511	0.208	0.480	2.16	-0.300	3.60		
2/20/2013	8:47:00	14.724	14.518	0.206	0.475	2.16	-0.295	3.54		
2/20/2013	9:02:00	14.724	14.513	0.211	0.487	2.16	-0.307	3.68		
2/20/2013	9:17:00	14.726	14.515	0.211	0.487	2.16	-0.307	3.68		
2/20/2013	9:32:00	14.730	14.517	0.213	0.491	2.16	-0.311	3.74		
2/20/2013	9:47:00	14.733	14.521	0.212	0.489	2.16	-0.309	3.71		
2/20/2013	10:02:00	14.732	14.516	0.216	0.498	2.16	-0.318	3.82		
2/20/2013	10:17:00	14.731	14.511	0.220	0.508	2.16	-0.328	3.93		
2/20/2013	10:32:00	14.733	14.509	0.224	0.517	2.16	-0.337	4.04		
2/20/2013	10:47:00	14.736	14.506	0.230	0.531	2.16	-0.351	4.21		
2/20/2013	11:02:00	14.736	14.503	0.233	0.538	2.16	-0.358	4.29		
2/20/2013	11:17:00	14.726	14.497	0.229	0.528	2.16	-0.348	4.18		
2/20/2013	11:32:00	14.722	14.492	0.230	0.531	2.16	-0.351	4.21		
2/20/2013	11:47:00	14.723	14.493	0.230	0.531	2.16	-0.351	4.21		
2/20/2013	12:02:00	14.723	14.487	0.236	0.544	2.16	-0.364	4.37		
2/20/2013	12:17:00	14.717	14.486	0.231	0.533	2.16	-0.353	4.24		
2/20/2013	12:32:00	14.714	14.486	0.228	0.526	2.16	-0.346	4.15		
2/20/2013	12:47:00	14.710	14.484	0.226	0.521	2.16	-0.341	4.10		
2/20/2013	13:02:00	14.702	14.484	0.218	0.503	2.16	-0.323	3.88		
2/20/2013	13:17:00	14.704	14.479	0.225	0.519	2.16	-0.339	4.07		
2/20/2013	13:32:00	14.719	14.475	0.244	0.563	2.16	-0.383	4.59		

2/20/2013	13:47:00	14.702	14.477	0.225	0.519	2.16	-0.339	4.07
2/20/2013	14:02:00	14.707	14.470	0.237	0.547	2.16	-0.367	4.40
2/20/2013	14:17:00	14.701	14.476	0.225	0.519	2.16	-0.339	4.07
2/20/2013	14:32:00	14.681	14.475	0.206	0.475	2.16	-0.295	3.54
2/20/2013	14:47:00	14.703	14.480	0.223	0.514	2.16	-0.334	4.01
2/20/2013	15:02:00	14.689	14.478	0.211	0.487	2.16	-0.307	3.68
2/20/2013	15:17:00	14.705	14.481	0.224	0.517	2.16	-0.337	4.04
2/20/2013	15:32:00	14.693	14.481	0.212	0.489	2.16	-0.309	3.71
2/20/2013	15:47:00	14.681	14.472	0.209	0.482	2.16	-0.302	3.63
2/20/2013	16:02:00	14.690	14.477	0.213	0.491	2.16	-0.311	3.74
2/20/2013	16:17:00	14.696	14.476	0.220	0.508	2.16	-0.328	3.93
2/20/2013	16:32:00	14.689	14.478	0.211	0.487	2.16	-0.307	3.68
2/20/2013	16:47:00	14.698	14.481	0.217	0.501	2.16	-0.321	3.85
2/20/2013	17:02:00	14.686	14.485	0.201	0.464	2.16	-0.284	3.40
2/20/2013	17:17:00	14.690	14.480	0.210	0.484	2.16	-0.304	3.65
2/20/2013	17:32:00	14.695	14.494	0.201	0.464	2.16	-0.284	3.40
2/20/2013	17:47:00	14.694	14.500	0.194	0.448	2.16	-0.268	3.21
2/20/2013	18:02:00	14.698	14.496	0.202	0.466	2.16	-0.286	3.43
2/20/2013	18:17:00	14.699	14.497	0.202	0.466	2.16	-0.286	3.43
2/20/2013	18:32:00	14.705	14.491	0.214	0.494	2.16	-0.314	3.76
2/20/2013	18:47:00	14.710	14.479	0.231	0.533	2.16	-0.353	4.24
2/20/2013	19:02:00	14.709	14.492	0.217	0.501	2.16	-0.321	3.85
2/20/2013	19:17:00	14.706	14.496	0.210	0.484	2.16	-0.304	3.65
2/20/2013	19:32:00	14.712	14.503	0.209	0.482	2.16	-0.302	3.63
2/20/2013	19:47:00	14.698	14.499	0.199	0.459	2.16	-0.279	3.35
2/20/2013	20:02:00	14.704	14.497	0.207	0.478	2.16	-0.298	3.57
2/20/2013	20:17:00	14.701	14.495	0.206	0.475	2.16	-0.295	3.54
2/20/2013	20:32:00	14.707	14.502	0.205	0.473	2.16	-0.293	3.52
2/20/2013	20:47:00	14.709	14.503	0.206	0.475	2.16	-0.295	3.54
2/20/2013	21:02:00	14.709	14.505	0.204	0.471	2.16	-0.291	3.49
2/20/2013	21:17:00	14.706	14.508	0.198	0.457	2.16	-0.277	3.32
2/20/2013	21:32:00	14.705	14.508	0.197	0.454	2.16	-0.274	3.29
2/20/2013	21:47:00	14.701	14.512	0.189	0.436	2.16	-0.256	3.07
2/20/2013	22:02:00	14.709	14.507	0.202	0.466	2.16	-0.286	3.43
2/20/2013	22:17:00	14.711	14.508	0.203	0.468	2.16	-0.288	3.46
2/20/2013	22:32:00	14.714	14.506	0.208	0.480	2.16	-0.300	3.60
2/20/2013	22:47:00	14.715	14.506	0.209	0.482	2.16	-0.302	3.63
2/20/2013	23:02:00	14.716	14.509	0.207	0.478	2.16	-0.298	3.57
2/20/2013	23:17:00	14.710	14.518	0.192	0.443	2.16	-0.263	3.16
2/20/2013	23:32:00	14.710	14.520	0.190	0.438	2.16	-0.258	3.10
2/20/2013	23:47:00	14.710	14.515	0.195	0.450	2.16	-0.270	3.24
2/21/2013	0:02:00	14.713	14.522	0.191	0.441	2.16	-0.261	3.13
2/21/2013	0:17:00	14.717	14.527	0.190	0.438	2.16	-0.258	3.10
2/21/2013	0:32:00	14.718	14.526	0.192	0.443	2.16	-0.263	3.16
2/21/2013	0:47:00	14.721	14.521	0.200	0.461	2.16	-0.281	3.38
2/21/2013	1:02:00	14.722	14.524	0.198	0.457	2.16	-0.277	3.32
2/21/2013	1:17:00	14.723	14.524	0.199	0.459	2.16	-0.279	3.35
2/21/2013	1:32:00	14.728	14.526	0.202	0.466	2.16	-0.286	3.43
2/21/2013	1:47:00	14.727	14.525	0.202	0.466	2.16	-0.286	3.43
2/21/2013	2:02:00	14.725	14.530	0.195	0.450	2.16	-0.270	3.24
2/21/2013	2:17:00	14.722	14.532	0.190	0.438	2.16	-0.258	3.10
2/21/2013	2:32:00	14.722	14.532	0.190	0.438	2.16	-0.258	3.10
2/21/2013	2:47:00	14.728	14.533	0.195	0.450	2.16	-0.270	3.24
2/21/2013	3:02:00	14.728	14.531	0.197	0.454	2.16	-0.274	3.29
2/21/2013	3:17:00	14.730	14.532	0.198	0.457	2.16	-0.277	3.32
2/21/2013	3:32:00	14.732	14.532	0.200	0.461	2.16	-0.281	3.38
2/21/2013	3:47:00	14.730	14.537	0.193	0.445	2.16	-0.265	3.18
2/21/2013	4:02:00	14.733	14.533	0.200	0.461	2.16	-0.281	3.38
2/21/2013	4:17:00	14.734	14.546	0.188	0.434	2.16	-0.254	3.04
2/21/2013	4:32:00	14.731	14.534	0.197	0.454	2.16	-0.274	3.29
2/21/2013	4:47:00	14.736	14.540	0.196	0.452	2.16	-0.272	3.27
2/21/2013	5:02:00	14.735	14.549	0.186	0.429	2.16	-0.249	2.99
2/21/2013	5:17:00	14.737	14.547	0.190	0.438	2.16	-0.258	3.10
2/21/2013	5:32:00	14.740	14.549	0.191	0.441	2.16	-0.261	3.13
2/21/2013	5:47:00	14.740	14.554	0.186	0.429	2.16	-0.249	2.99
2/21/2013	6:02:00	14.745	14.553	0.192	0.443	2.16	-0.263	3.16
2/21/2013	6:17:00	14.747	14.551	0.196	0.452	2.16	-0.272	3.27
2/21/2013	6:32:00	14.746	14.553	0.193	0.445	2.16	-0.265	3.18
2/21/2013	6:47:00	14.743	14.555	0.188	0.434	2.16	-0.254	3.04
2/21/2013	7:02:00	14.753	14.555	0.198	0.457	2.16	-0.277	3.32
2/21/2013	7:17:00	14.753	14.560	0.193	0.445	2.16	-0.265	3.18
2/21/2013	7:32:00	14.751	14.570	0.181	0.418	2.16	-0.238	2.85
2/21/2013	7:47:00	14.759	14.567	0.192	0.443	2.16	-0.263	3.16
2/21/2013	8:02:00	14.759	14.570	0.189	0.436	2.16	-0.256	3.07
2/21/2013	8:17:00	14.765	14.567	0.198	0.457	2.16	-0.277	3.32
2/21/2013	8:32:00	14.769	14.562	0.207	0.478	2.16	-0.298	3.57
2/21/2013	8:47:00	14.771	14.555	0.216	0.498	2.16	-0.318	3.82
2/21/2013	9:02:00	14.774	14.564	0.210	0.484	2.16	-0.304	3.65
2/21/2013	9:17:00	14.769	14.560	0.209	0.482	2.16	-0.302	3.63
2/21/2013	9:32:00	14.771	14.563	0.208	0.480	2.16	-0.300	3.60
2/21/2013	9:47:00	14.773	14.565	0.208	0.480	2.16	-0.300	3.60
2/21/2013	10:02:00	14.764	14.558	0.206	0.475	2.16	-0.295	3.54
2/21/2013	10:17:00	14.764	14.564	0.200	0.461	2.16	-0.281	3.38
2/21/2013	10:32:00	14.763	14.554	0.209	0.482	2.16	-0.302	3.63
2/21/2013	10:47:00	14.765	14.553	0.212	0.489	2.16	-0.309	3.71
2/21/2013	11:02:00	14.763	14.551	0.212	0.489	2.16	-0.309	3.71
2/21/2013	11:17:00	14.758	14.544	0.214	0.494	2.16	-0.314	3.76
2/21/2013	11:32:00	14.761	14.543	0.218	0.503	2.16	-0.323	3.88
2/21/2013	11:47:00	14.756	14.539	0.217	0.501	2.16	-0.321	3.85
2/21/2013	12:02:00	14.753	14.530	0.223	0.514	2.16	-0.334	4.01
2/21/2013	12:17:00	14.752	14.527	0.225	0.519	2.16	-0.339	4.07
2/21/2013	12:32:00	14.744	14.523	0.221	0.510	2.16	-0.330	3.96
2/21/2013	12:47:00	14.745	14.516	0.229	0.528	2.16	-0.348	4.18
2/21/2013	13:02:00	14.737	14.517	0.220	0.508	2.16	-0.328	3.93
2/21/2013	13:17:00	14.738	14.509	0.229	0.528	2.16	-0.348	4.18
2/21/2013	13:32:00	14.731	14.499	0.232	0.535	2.16	-0.355	4.26
2/21/2013	13:47:00	14.724	14.505	0.219	0.505	2.16	-0.325	3.90
2/21/2013	14:02:00	14.719	14.508	0.211	0.487	2.16	-0.307	3.68
2/21/2013	14:17:00	14.712	14.510	0.202	0.466	2.16	-0.286	3.43
2/21/2013	14:32:00	14.709	14.515	0.194	0.448	2.16	-0.268	3.21
2/21/2013	14:47:00	14.709	14.519	0.190	0.438	2.16	-0.258	3.10
2/21/2013	15:02:00	14.716	14.523	0.193	0.445	2.16	-0.265	3.18
2/21/2013	15:17:00	14.707	14.516	0.191	0.441	2.16	-0.261	3.13
2/21/2013	15:32:00	14.706	14.517	0.189	0.436	2.16	-0.256	3.07
2/21/2013	15:47:00	14.720	14.509	0.211	0.487	2.16	-0.307	3.68
2/21/2013	16:02:00	14.715	14.510	0.205	0.473	2.16	-0.293	3.52
2/21/2013	16:17:00	14.718	14.508	0.210	0.484	2.16	-0.304	3.65
2/21/2013	16:32:00	14.712	14.514	0.198	0.457	2.16	-0.277	3.32
2/21/2013	16:47:00	14.710	14.514	0.196	0.452	2.16	-0.272	3.27
2/21/2013	17:02:00	14.716	14.513	0.203	0.468	2.16	-0.288	3.46
2/21/2013	17:17:00	14.707	14.525	0.182	0.420	2.16	-0.240	2.88
2/21/2013	17:32:00	14.711	14.517	0.194	0.448	2.16	-0.268	3.21
2/21/2013	17:47:00	14.714	14.526	0.188	0.434	2.16	-0.254	3.04
2/21/2013	18:02:00	14.712	14.521	0.191	0.441	2.16	-0.261	3.13
2/21/2013	18:17:00	14.722	14.527	0.195	0.450	2.16	-0.270	3.24
2/21/2013	18:32:00	14.722	14.526	0.196	0.452	2.16	-0.272	3.27
2/21/2013	18:47:00	14.726	14.526	0.200	0.461	2.16	-0.281	3.38
2/21/2013	19:02:00	14.725	14.522	0.203	0.468	2.16	-0.288	3.46
2/21/2013	19:17:00	14.721	14.526	0.195	0.450	2.16	-0.270	3.24
2/21/2013	19:32:00	14.730	14.526	0.204	0.471	2.16	-0.291	3.49
2/21/2013	19:47:00	14.726	14.524	0.202	0.466	2.16	-0.286	3.43
2/21/2013	20:02:00	14.725	14.525	0.200	0.461	2.16	-0.281	3.38
2/21/2013	20:17:00	14.724	14.524	0.200	0.461	2.16	-0.281	3.38
2/21/2013	20:32:00	14.723	14.531	0.192	0.443	2.16	-0.263	3.16
2/21/2013	20:47:00	14.722	14.547	0.175	0.404	2.16	-0.224	2.68
2/21/2013	21:02:00	14.726	14.545	0.181	0.418	2.16	-0.238	2.85
2/21/2013	21:17:00	14.730	14.551	0.179	0.413	2.16	-0.233	2.80
2/21/2013	21:32:00	14.726	14.550	0.176	0.406	2.16	-0.226	2.71
2/21/2013	21:47:00	14.737	14.550	0.187	0.431	2.16	-0.251	3.02
2/21/2013	22:02:00	14.746	14.555	0.191	0.441	2.16	-0.261	3.13
2/21/2013	22:17:00	14.745	14.551	0.194	0.448	2.16	-0.268	3.21
2/21/2013	22:32:00	14.750	14.548	0.202	0.466	2.16	-0.286	3.43
2/21/2013	22:47:00	14.749	14.562	0.187	0.431	2.16	-0.251	3.02

2/21/2013	23:02:00	14.752	14.565	0.187	0.431	2.16	-0.251	3.02	
2/21/2013	23:17:00	14.750	14.578	0.172	0.397	2.16	-0.217	2.60	
2/21/2013	23:32:00	14.753	14.566	0.187	0.431	2.16	-0.251	3.02	
2/21/2013	23:47:00	14.755	14.562	0.193	0.445	2.16	-0.265	3.18	
2/22/2013	0:02:00	14.760	14.565	0.195	0.450	2.16	-0.270	3.24	
2/22/2013	0:17:00	14.780	14.566	0.214	0.494	2.16	-0.314	3.76	
2/22/2013	0:32:00	14.778	14.577	0.201	0.464	2.16	-0.284	3.40	
2/22/2013	0:47:00	14.768	14.572	0.196	0.452	2.16	-0.272	3.27	
2/22/2013	1:02:00	14.757	14.576	0.181	0.418	2.16	-0.238	2.85	
2/22/2013	1:17:00	14.761	14.586	0.175	0.404	2.16	-0.224	2.68	
2/22/2013	1:32:00	14.764	14.595	0.169	0.390	2.16	-0.210	2.52	
2/22/2013	1:47:00	14.768	14.597	0.171	0.394	2.16	-0.214	2.57	
2/22/2013	2:02:00	14.771	14.593	0.178	0.411	2.16	-0.231	2.77	
2/22/2013	2:17:00	14.773	14.581	0.192	0.443	2.16	-0.263	3.16	
2/22/2013	2:32:00	14.797	14.578	0.219	0.505	2.16	-0.325	3.90	
2/22/2013	2:47:00	14.793	14.570	0.223	0.514	2.16	-0.334	4.01	
2/22/2013	3:02:00	14.792	14.573	0.219	0.505	2.16	-0.325	3.90	
2/22/2013	3:17:00	14.782	14.569	0.213	0.491	2.16	-0.311	3.74	
2/22/2013	3:32:00	14.773	14.562	0.211	0.487	2.16	-0.307	3.68	
2/22/2013	3:47:00	14.776	14.561	0.215	0.496	2.16	-0.316	3.79	
2/22/2013	4:02:00	14.765	14.565	0.200	0.461	2.16	-0.281	3.38	
2/22/2013	4:17:00	14.765	14.569	0.196	0.452	2.16	-0.272	3.27	
2/22/2013	4:32:00	14.756	14.573	0.183	0.422	2.16	-0.242	2.91	
2/22/2013	4:47:00	14.759	14.583	0.176	0.406	2.16	-0.226	2.71	
2/22/2013	5:02:00	14.763	14.578	0.185	0.427	2.16	-0.247	2.96	
2/22/2013	5:17:00	14.764	14.582	0.182	0.420	2.16	-0.240	2.88	
2/22/2013	5:32:00	14.764	14.575	0.189	0.436	2.16	-0.256	3.07	
2/22/2013	5:47:00	14.770	14.571	0.199	0.459	2.16	-0.279	3.35	0.01
2/22/2013	6:02:00	14.768	14.571	0.197	0.454	2.16	-0.274	3.29	0.02
2/22/2013	6:17:00	14.769	14.568	0.201	0.464	2.16	-0.284	3.40	
2/22/2013	6:32:00	14.768	14.584	0.184	0.424	2.16	-0.244	2.93	0.03
2/22/2013	6:47:00	14.767	14.576	0.191	0.441	2.16	-0.261	3.13	
2/22/2013	7:02:00	14.773	14.576	0.197	0.454	2.16	-0.274	3.29	
2/22/2013	7:17:00	14.770	14.568	0.202	0.466	2.16	-0.286	3.43	
2/22/2013	7:32:00	14.773	14.598	0.175	0.404	2.16	-0.224	2.68	
2/22/2013	7:47:00	14.776	14.570	0.206	0.475	2.16	-0.295	3.54	
2/22/2013	8:02:00	14.778	14.565	0.213	0.491	2.16	-0.311	3.74	
2/22/2013	8:17:00	14.772	14.589	0.183	0.422	2.16	-0.242	2.91	
2/22/2013	8:32:00	14.781	14.571	0.210	0.484	2.16	-0.304	3.65	
2/22/2013	8:47:00	14.782	14.579	0.203	0.468	2.16	-0.288	3.46	0.04
2/22/2013	9:02:00	14.777	14.585	0.192	0.443	2.16	-0.263	3.16	
2/22/2013	9:17:00	14.774	14.575	0.199	0.459	2.16	-0.279	3.35	
2/22/2013	9:32:00	14.778	14.583	0.195	0.450	2.16	-0.270	3.24	
2/22/2013	9:47:00	14.780	14.581	0.199	0.459	2.16	-0.279	3.35	
2/22/2013	10:02:00	14.782	14.581	0.201	0.464	2.16	-0.284	3.40	
2/22/2013	10:17:00	14.781	14.578	0.203	0.468	2.16	-0.288	3.46	
2/22/2013	10:32:00	14.782	14.580	0.202	0.466	2.16	-0.286	3.43	
2/22/2013	10:47:00	14.777	14.580	0.197	0.454	2.16	-0.274	3.29	
2/22/2013	11:02:00	14.783	14.562	0.221	0.510	2.16	-0.330	3.96	
2/22/2013	11:17:00	14.779	14.586	0.193	0.445	2.16	-0.265	3.18	
2/22/2013	11:32:00	14.775	14.565	0.210	0.484	2.16	-0.304	3.65	
2/22/2013	11:47:00	14.775	14.559	0.216	0.498	2.16	-0.318	3.82	
2/22/2013	12:02:00	14.773	14.561	0.212	0.489	2.16	-0.309	3.71	0.05
2/22/2013	12:17:00	14.771	14.553	0.218	0.503	2.16	-0.323	3.88	0.06
2/22/2013	12:32:00	14.771	14.551	0.220	0.508	2.16	-0.328	3.93	
2/22/2013	12:47:00	14.763	14.546	0.217	0.501	2.16	-0.321	3.85	
2/22/2013	13:02:00	14.765	14.549	0.216	0.498	2.16	-0.318	3.82	
2/22/2013	13:17:00	14.754	14.546	0.208	0.480	2.16	-0.300	3.60	0.07
2/22/2013	13:32:00	14.755	14.546	0.209	0.482	2.16	-0.302	3.63	
2/22/2013	13:47:00	14.743	14.539	0.204	0.471	2.16	-0.291	3.49	
2/22/2013	14:02:00	14.751	14.550	0.201	0.464	2.16	-0.284	3.40	
2/22/2013	14:17:00	14.752	14.548	0.204	0.471	2.16	-0.291	3.49	
2/22/2013	14:32:00	14.746	14.544	0.202	0.466	2.16	-0.286	3.43	
2/22/2013	14:47:00	14.751	14.548	0.203	0.468	2.16	-0.288	3.46	0.08
2/22/2013	15:02:00	14.748	14.546	0.202	0.466	2.16	-0.286	3.43	
2/22/2013	15:17:00	14.751	14.549	0.202	0.466	2.16	-0.286	3.43	
2/22/2013	15:32:00	14.750	14.547	0.203	0.468	2.16	-0.288	3.46	0.09
2/22/2013	15:47:00	14.756	14.543	0.213	0.491	2.16	-0.311	3.74	0.10
2/22/2013	16:02:00	14.758	14.535	0.223	0.514	2.16	-0.334	4.01	
2/22/2013	16:17:00	14.762	14.542	0.220	0.508	2.16	-0.328	3.93	0.11
2/22/2013	16:32:00	14.759	14.541	0.218	0.503	2.16	-0.323	3.88	
2/22/2013	16:47:00	14.755	14.539	0.216	0.498	2.16	-0.318	3.82	
2/22/2013	17:02:00	14.761	14.537	0.224	0.517	2.16	-0.337	4.04	0.12
2/22/2013	17:17:00	14.750	14.538	0.212	0.489	2.16	-0.309	3.71	
2/22/2013	17:32:00	14.756	14.530	0.226	0.521	2.16	-0.341	4.10	
2/22/2013	17:47:00	14.757	14.530	0.227	0.524	2.16	-0.344	4.12	0.13
2/22/2013	18:02:00	14.757	14.529	0.228	0.526	2.16	-0.346	4.15	0.14
2/22/2013	18:17:00	14.752	14.527	0.225	0.519	2.16	-0.339	4.07	
2/22/2013	18:32:00	14.755	14.535	0.220	0.508	2.16	-0.328	3.93	
2/22/2013	18:47:00	14.756	14.531	0.225	0.519	2.16	-0.339	4.07	
2/22/2013	19:02:00	14.752	14.536	0.216	0.498	2.16	-0.318	3.82	
2/22/2013	19:17:00	14.748	14.535	0.213	0.491	2.16	-0.311	3.74	
2/22/2013	19:32:00	14.757	14.535	0.222	0.512	2.16	-0.332	3.99	0.15
2/22/2013	19:47:00	14.757	14.538	0.219	0.505	2.16	-0.325	3.90	
2/22/2013	20:02:00	14.756	14.532	0.224	0.517	2.16	-0.337	4.04	
2/22/2013	20:17:00	14.758	14.534	0.224	0.517	2.16	-0.337	4.04	
2/22/2013	20:32:00	14.756	14.538	0.218	0.503	2.16	-0.323	3.88	
2/22/2013	20:47:00	14.757	14.531	0.226	0.521	2.16	-0.341	4.10	
2/22/2013	21:02:00	14.756	14.536	0.220	0.508	2.16	-0.328	3.93	
2/22/2013	21:17:00	14.757	14.535	0.222	0.512	2.16	-0.332	3.99	
2/22/2013	21:32:00	14.756	14.539	0.217	0.501	2.16	-0.321	3.85	
2/22/2013	21:47:00	14.755	14.530	0.225	0.519	2.16	-0.339	4.07	
2/22/2013	22:02:00	14.756	14.520	0.236	0.544	2.16	-0.364	4.37	
2/22/2013	22:17:00	14.758	14.513	0.245	0.565	2.16	-0.385	4.62	
2/22/2013	22:32:00	14.759	14.505	0.254	0.586	2.16	-0.406	4.87	
2/22/2013	22:47:00	14.756	14.507	0.249	0.574	2.16	-0.394	4.73	0.16
2/22/2013	23:02:00	14.749	14.508	0.241	0.556	2.16	-0.376	4.51	
2/22/2013	23:17:00	14.736	14.509	0.227	0.524	2.16	-0.344	4.12	
2/22/2013	23:32:00	14.724	14.509	0.215	0.496	2.16	-0.316	3.79	
2/22/2013	23:47:00	14.726	14.510	0.216	0.498	2.16	-0.318	3.82	
2/23/2013	0:02:00	14.724	14.505	0.219	0.505	2.16	-0.325	3.90	
2/23/2013	0:17:00	14.732	14.504	0.228	0.526	2.16	-0.346	4.15	
2/23/2013	0:32:00	14.729	14.497	0.232	0.535	2.16	-0.355	4.26	
2/23/2013	0:47:00	14.731	14.491	0.240	0.554	2.16	-0.374	4.48	
2/23/2013	1:02:00	14.726	14.488	0.238	0.549	2.16	-0.369	4.43	
2/23/2013	1:17:00	14.731	14.484	0.247	0.570	2.16	-0.390	4.68	
2/23/2013	1:32:00	14.719	14.480	0.239	0.551	2.16	-0.371	4.46	
2/23/2013	1:47:00	14.721	14.479	0.242	0.558	2.16	-0.378	4.54	
2/23/2013	2:02:00	14.712	14.467	0.245	0.565	2.16	-0.385	4.62	
2/23/2013	2:17:00	14.713	14.462	0.251	0.579	2.16	-0.399	4.79	0.03
2/23/2013	2:32:00	14.703	14.465	0.238	0.549	2.16	-0.369	4.43	0.06
2/23/2013	2:47:00	14.710	14.464	0.246	0.568	2.16	-0.388	4.65	0.09
2/23/2013	3:02:00	14.703	14.472	0.231	0.533	2.16	-0.353	4.24	0.10
2/23/2013	3:17:00	14.723	14.467	0.256	0.591	2.16	-0.411	4.93	
2/23/2013	3:32:00	14.735	14.468	0.267	0.616	2.16	-0.436	5.23	
2/23/2013	3:47:00	14.748	14.463	0.285	0.657	2.16	-0.477	5.73	
2/23/2013	4:02:00	14.748	14.460	0.288	0.664	2.16	-0.484	5.81	0.11
2/23/2013	4:17:00	14.751	14.454	0.297	0.685	2.16	-0.505	6.06	0.12
2/23/2013	4:32:00	14.751	14.453	0.298	0.687	2.16	-0.507	6.09	0.13
2/23/2013	4:47:00	14.748	14.451	0.297	0.685	2.16	-0.505	6.06	0.14
2/23/2013	5:02:00	14.748	14.452	0.296	0.683	2.16	-0.503	6.03	0.15
2/23/2013	5:17:00	14.752	14.456	0.296	0.683	2.16	-0.503	6.03	0.16
2/23/2013	5:32:00	14.762	14.448	0.314	0.724	2.16	-0.544	6.53	0.17
2/23/2013	5:47:00	14.762	14.441	0.321	0.741	2.16	-0.561	6.73	0.18
2/23/2013	6:02:00	14.769	14.441	0.328	0.757	2.16	-0.577	6.92	0.19
2/23/2013	6:17:00	14.774	14.449	0.325	0.750	2.16	-0.570	6.84	0.20
2/23/2013	6:32:00	14.779	14.457	0.322	0.743	2.16	-0.563	6.75	0.22
2/23/2013	6:47:00	14.784	14.447	0.337	0.777	2.16	-0.597	7.17	0.23
2/23/2013	7:02:00	14.792	14.451	0.341	0.787	2.16	-0.607	7.28	0.24
2/23/2013	7:17:00	14.808	14.431	0.377	0.870	2.16	-0.690	8.28	0.26
2/23/2013	7:32:00	14.829	14.437	0.392	0.904	2.16	-0.724	8.69	0.28
2/23/2013	7:47:00	14.854	14.437	0.417	0.962	2.16	-0.782	9.38	0.30
2/23/2013	8:02:00	14.900	14.453	0.447	1.031	2.16	-0.851	10.21	0.32

2/23/2013	8:17:00	14.915	14.434	0.481	1.110	2.16	-0.930	11.16	0.34
2/23/2013	8:32:00	14.933	14.446	0.487	1.124	2.16	-0.944	11.32	0.36
2/23/2013	8:47:00	14.941	14.450	0.491	1.133	2.16	-0.953	11.43	
2/23/2013	9:02:00	14.918	14.443	0.475	1.096	2.16	-0.916	10.99	
2/23/2013	9:17:00	14.891	14.440	0.451	1.040	2.16	-0.860	10.33	
2/23/2013	9:32:00	14.866	14.442	0.424	0.978	2.16	-0.798	9.58	
2/23/2013	9:47:00	14.854	14.440	0.414	0.955	2.16	-0.775	9.30	
2/23/2013	10:02:00	14.835	14.441	0.394	0.909	2.16	-0.729	8.75	
2/23/2013	10:17:00	14.817	14.436	0.381	0.879	2.16	-0.699	8.39	
2/23/2013	10:32:00	14.810	14.436	0.374	0.863	2.16	-0.683	8.19	
2/23/2013	10:47:00	14.809	14.434	0.375	0.865	2.16	-0.685	8.22	
2/23/2013	11:02:00	14.806	14.436	0.370	0.854	2.16	-0.674	8.08	
2/23/2013	11:17:00	14.793	14.429	0.364	0.840	2.16	-0.660	7.92	
2/23/2013	11:32:00	14.795	14.437	0.358	0.826	2.16	-0.646	7.75	0.37
2/23/2013	11:47:00	14.789	14.426	0.363	0.837	2.16	-0.657	7.89	0.36
2/23/2013	12:02:00	14.787	14.430	0.357	0.824	2.16	-0.644	7.72	
2/23/2013	12:17:00	14.782	14.426	0.356	0.821	2.16	-0.641	7.70	0.38
2/23/2013	12:32:00	14.788	14.418	0.370	0.854	2.16	-0.674	8.08	
2/23/2013	12:47:00	14.785	14.418	0.367	0.847	2.16	-0.667	8.00	
2/23/2013	13:02:00	14.781	14.412	0.369	0.851	2.16	-0.671	8.06	
2/23/2013	13:17:00	14.779	14.411	0.368	0.849	2.16	-0.669	8.03	
2/23/2013	13:32:00	14.773	14.404	0.369	0.851	2.16	-0.671	8.06	
2/23/2013	13:47:00	14.770	14.398	0.372	0.858	2.16	-0.678	8.14	
2/23/2013	14:02:00	14.769	14.397	0.372	0.858	2.16	-0.678	8.14	
2/23/2013	14:17:00	14.760	14.398	0.362	0.835	2.16	-0.655	7.86	
2/23/2013	14:32:00	14.766	14.404	0.362	0.835	2.16	-0.655	7.86	
2/23/2013	14:47:00	14.752	14.405	0.347	0.801	2.16	-0.621	7.45	
2/23/2013	15:02:00	14.751	14.396	0.355	0.819	2.16	-0.639	7.67	
2/23/2013	15:17:00	14.744	14.398	0.346	0.798	2.16	-0.618	7.42	
2/23/2013	15:32:00	14.751	14.401	0.350	0.807	2.16	-0.627	7.53	
2/23/2013	15:47:00	14.744	14.400	0.344	0.794	2.16	-0.614	7.36	
2/23/2013	16:02:00	14.746	14.387	0.359	0.828	2.16	-0.648	7.78	
2/23/2013	16:17:00	14.739	14.390	0.349	0.805	2.16	-0.625	7.50	
2/23/2013	16:32:00	14.741	14.387	0.354	0.817	2.16	-0.637	7.64	
2/23/2013	16:47:00	14.746	14.390	0.356	0.821	2.16	-0.641	7.70	
2/23/2013	17:02:00	14.731	14.393	0.338	0.780	2.16	-0.600	7.20	
2/23/2013	17:17:00	14.738	14.390	0.348	0.803	2.16	-0.623	7.47	
2/23/2013	17:32:00	14.723	14.389	0.334	0.771	2.16	-0.591	7.09	
2/23/2013	17:47:00	14.716	14.393	0.323	0.745	2.16	-0.565	6.78	
2/23/2013	18:02:00	14.717	14.391	0.326	0.752	2.16	-0.572	6.86	
2/23/2013	18:17:00	14.722	14.398	0.324	0.747	2.16	-0.567	6.81	
2/23/2013	18:32:00	14.714	14.402	0.312	0.720	2.16	-0.540	6.48	
2/23/2013	18:47:00	14.722	14.397	0.325	0.750	2.16	-0.570	6.84	
2/23/2013	19:02:00	14.716	14.396	0.320	0.738	2.16	-0.558	6.70	
2/23/2013	19:17:00	14.722	14.393	0.329	0.759	2.16	-0.579	6.95	
2/23/2013	19:32:00	14.723	14.402	0.321	0.741	2.16	-0.561	6.73	
2/23/2013	19:47:00	14.722	14.401	0.321	0.741	2.16	-0.561	6.73	
2/23/2013	20:02:00	14.719	14.391	0.328	0.757	2.16	-0.577	6.92	
2/23/2013	20:17:00	14.717	14.393	0.324	0.747	2.16	-0.567	6.81	
2/23/2013	20:32:00	14.709	14.387	0.322	0.743	2.16	-0.563	6.75	
2/23/2013	20:47:00	14.716	14.385	0.331	0.764	2.16	-0.584	7.00	
2/23/2013	21:02:00	14.709	14.376	0.333	0.768	2.16	-0.588	7.06	
2/23/2013	21:17:00	14.709	14.384	0.325	0.750	2.16	-0.570	6.84	
2/23/2013	21:32:00	14.707	14.389	0.318	0.734	2.16	-0.554	6.64	
2/23/2013	21:47:00	14.696	14.394	0.302	0.697	2.16	-0.517	6.20	
2/23/2013	22:02:00	14.686	14.385	0.301	0.694	2.16	-0.514	6.17	
2/23/2013	22:17:00	14.692	14.390	0.302	0.697	2.16	-0.517	6.20	
2/23/2013	22:32:00	14.691	14.389	0.302	0.697	2.16	-0.517	6.20	
2/23/2013	22:47:00	14.692	14.386	0.306	0.706	2.16	-0.526	6.31	
2/23/2013	23:02:00	14.691	14.385	0.306	0.706	2.16	-0.526	6.31	
2/23/2013	23:17:00	14.687	14.385	0.302	0.697	2.16	-0.517	6.20	
2/23/2013	23:32:00	14.685	14.382	0.303	0.699	2.16	-0.519	6.23	
2/23/2013	23:47:00	14.683	14.386	0.297	0.685	2.16	-0.505	6.06	
2/24/2013	0:02:00	14.681	14.388	0.293	0.676	2.16	-0.496	5.95	
2/24/2013	0:17:00	14.681	14.387	0.294	0.678	2.16	-0.498	5.98	
2/24/2013	0:32:00	14.680	14.392	0.288	0.664	2.16	-0.484	5.81	
2/24/2013	0:47:00	14.676	14.387	0.289	0.667	2.16	-0.487	5.84	
2/24/2013	1:02:00	14.675	14.387	0.288	0.664	2.16	-0.484	5.81	
2/24/2013	1:17:00	14.676	14.383	0.293	0.676	2.16	-0.496	5.95	
2/24/2013	1:32:00	14.678	14.382	0.296	0.683	2.16	-0.503	6.03	
2/24/2013	1:47:00	14.684	14.383	0.301	0.694	2.16	-0.514	6.17	
2/24/2013	2:02:00	14.678	14.379	0.299	0.690	2.16	-0.510	6.12	
2/24/2013	2:17:00	14.675	14.381	0.294	0.678	2.16	-0.498	5.98	
2/24/2013	2:32:00	14.674	14.376	0.298	0.687	2.16	-0.507	6.09	
2/24/2013	2:47:00	14.672	14.377	0.295	0.681	2.16	-0.501	6.01	
2/24/2013	3:02:00	14.670	14.379	0.291	0.671	2.16	-0.491	5.90	
2/24/2013	3:17:00	14.664	14.376	0.288	0.664	2.16	-0.484	5.81	
2/24/2013	3:32:00	14.665	14.380	0.285	0.657	2.16	-0.477	5.73	
2/24/2013	3:47:00	14.660	14.388	0.272	0.628	2.16	-0.448	5.37	
2/24/2013	4:02:00	14.657	14.391	0.266	0.614	2.16	-0.434	5.20	
2/24/2013	4:17:00	14.660	14.394	0.266	0.614	2.16	-0.434	5.20	
2/24/2013	4:32:00	14.662	14.394	0.268	0.618	2.16	-0.438	5.26	
2/24/2013	4:47:00	14.664	14.395	0.269	0.621	2.16	-0.441	5.29	
2/24/2013	5:02:00	14.674	14.397	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	5:17:00	14.674	14.400	0.274	0.632	2.16	-0.452	5.43	
2/24/2013	5:32:00	14.671	14.405	0.266	0.614	2.16	-0.434	5.20	
2/24/2013	5:47:00	14.675	14.405	0.270	0.623	2.16	-0.443	5.31	
2/24/2013	6:02:00	14.674	14.413	0.261	0.602	2.16	-0.422	5.07	
2/24/2013	6:17:00	14.677	14.420	0.257	0.593	2.16	-0.413	4.95	
2/24/2013	6:32:00	14.682	14.420	0.262	0.604	2.16	-0.424	5.09	
2/24/2013	6:47:00	14.685	14.427	0.258	0.595	2.16	-0.415	4.98	
2/24/2013	7:02:00	14.691	14.431	0.260	0.600	2.16	-0.420	5.04	
2/24/2013	7:17:00	14.693	14.434	0.259	0.598	2.16	-0.418	5.01	
2/24/2013	7:32:00	14.691	14.437	0.254	0.586	2.16	-0.406	4.87	
2/24/2013	7:47:00	14.701	14.442	0.259	0.598	2.16	-0.418	5.01	
2/24/2013	8:02:00	14.701	14.436	0.265	0.611	2.16	-0.431	5.18	
2/24/2013	8:17:00	14.706	14.438	0.268	0.618	2.16	-0.438	5.26	
2/24/2013	8:32:00	14.712	14.445	0.267	0.616	2.16	-0.436	5.23	
2/24/2013	8:47:00	14.711	14.445	0.266	0.614	2.16	-0.434	5.20	
2/24/2013	9:02:00	14.710	14.444	0.266	0.614	2.16	-0.434	5.20	
2/24/2013	9:17:00	14.715	14.438	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	9:32:00	14.716	14.442	0.274	0.632	2.16	-0.452	5.43	
2/24/2013	9:47:00	14.718	14.441	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	10:02:00	14.718	14.437	0.281	0.648	2.16	-0.468	5.62	
2/24/2013	10:17:00	14.719	14.442	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	10:32:00	14.716	14.441	0.275	0.634	2.16	-0.454	5.45	
2/24/2013	10:47:00	14.714	14.437	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	11:02:00	14.713	14.436	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	11:17:00	14.715	14.433	0.282	0.651	2.16	-0.471	5.65	
2/24/2013	11:32:00	14.715	14.432	0.283	0.653	2.16	-0.473	5.67	
2/24/2013	11:47:00	14.715	14.429	0.286	0.660	2.16	-0.480	5.76	
2/24/2013	12:02:00	14.703	14.430	0.273	0.630	2.16	-0.450	5.40	
2/24/2013	12:17:00	14.702	14.425	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	12:32:00	14.703	14.424	0.279	0.644	2.16	-0.464	5.56	
2/24/2013	12:47:00	14.706	14.420	0.286	0.660	2.16	-0.480	5.76	
2/24/2013	13:02:00	14.704	14.415	0.289	0.667	2.16	-0.487	5.84	
2/24/2013	13:17:00	14.696	14.418	0.278	0.641	2.16	-0.461	5.54	
2/24/2013	13:32:00	14.705	14.422	0.283	0.653	2.16	-0.473	5.67	
2/24/2013	13:47:00	14.697	14.414	0.283	0.653	2.16	-0.473	5.67	
2/24/2013	14:02:00	14.677	14.412	0.265	0.611	2.16	-0.431	5.18	
2/24/2013	14:17:00	14.697	14.420	0.277	0.639	2.16	-0.459	5.51	
2/24/2013	14:32:00	14.686	14.411	0.275	0.634	2.16	-0.454	5.45	
2/24/2013	14:47:00	14.684	14.420	0.264	0.609	2.16	-0.429	5.15	
2/24/2013	15:02:00	14.672	14.418	0.254	0.586	2.16	-0.406	4.87	
2/24/2013	15:17:00	14.689	14.420	0.269	0.621	2.16	-0.441	5.29	
2/24/2013	15:32:00	14.678	14.411	0.267	0.616	2.16	-0.436	5.23	
2/24/2013	15:47:00	14.680	14.415	0.265	0.611	2.16	-0.431	5.18	
2/24/2013	16:02:00	14.676	14.421	0.255	0.588	2.16	-0.408	4.90	
2/24/2013	16:17:00	14.675	14.415	0.260	0.600	2.16	-0.420	5.04	
2/24/2013	16:32:00	14.678	14.418	0.260	0.600	2.16	-0.420	5.04	
2/24/2013	16:47:00	14.682	14.424	0.258	0.595	2.16	-0.415	4.98	
2/24/2013	17:02:00	14.682	14.421	0.261	0.602	2.16	-0.422	5.07	
2/24/2013	17:17:00	14.678	14.426	0.252	0.581	2.16	-0.401	4.82	

2/24/2013	17:32:00	14.678	14.426	0.252	0.581	2.16	-0.401	4.82
2/24/2013	17:47:00	14.676	14.432	0.244	0.563	2.16	-0.383	4.59
2/24/2013	18:02:00	14.682	14.440	0.242	0.558	2.16	-0.378	4.54
2/24/2013	18:17:00	14.687	14.442	0.245	0.565	2.16	-0.385	4.62
2/24/2013	18:32:00	14.690	14.441	0.249	0.574	2.16	-0.394	4.73
2/24/2013	18:47:00	14.692	14.439	0.253	0.584	2.16	-0.404	4.84
2/24/2013	19:02:00	14.696	14.437	0.259	0.598	2.16	-0.418	5.01
2/24/2013	19:17:00	14.699	14.451	0.248	0.572	2.16	-0.392	4.71
2/24/2013	19:32:00	14.703	14.452	0.251	0.579	2.16	-0.399	4.79
2/24/2013	19:47:00	14.701	14.448	0.253	0.584	2.16	-0.404	4.84
2/24/2013	20:02:00	14.701	14.450	0.251	0.579	2.16	-0.399	4.79
2/24/2013	20:17:00	14.702	14.450	0.252	0.581	2.16	-0.401	4.82
2/24/2013	20:32:00	14.699	14.451	0.248	0.572	2.16	-0.392	4.71
2/24/2013	20:47:00	14.703	14.456	0.247	0.570	2.16	-0.390	4.68
2/24/2013	21:02:00	14.700	14.461	0.239	0.551	2.16	-0.371	4.46
2/24/2013	21:17:00	14.698	14.463	0.235	0.542	2.16	-0.362	4.35
2/24/2013	21:32:00	14.705	14.466	0.239	0.551	2.16	-0.371	4.46
2/24/2013	21:47:00	14.706	14.466	0.240	0.554	2.16	-0.374	4.48
2/24/2013	22:02:00	14.706	14.464	0.242	0.558	2.16	-0.378	4.54
2/24/2013	22:17:00	14.707	14.471	0.236	0.544	2.16	-0.364	4.37
2/24/2013	22:32:00	14.713	14.468	0.245	0.565	2.16	-0.385	4.62
2/24/2013	22:47:00	14.713	14.463	0.250	0.577	2.16	-0.397	4.76
2/24/2013	23:02:00	14.716	14.469	0.247	0.570	2.16	-0.390	4.68
2/24/2013	23:17:00	14.710	14.471	0.239	0.551	2.16	-0.371	4.46
2/24/2013	23:32:00	14.710	14.467	0.243	0.561	2.16	-0.381	4.57
2/24/2013	23:47:00	14.706	14.465	0.241	0.556	2.16	-0.376	4.51
2/25/2013	0:02:00	14.711	14.466	0.245	0.565	2.16	-0.385	4.62
2/25/2013	0:17:00	14.709	14.464	0.245	0.565	2.16	-0.385	4.62
2/25/2013	0:32:00	14.711	14.470	0.241	0.556	2.16	-0.376	4.51
2/25/2013	0:47:00	14.710	14.474	0.236	0.544	2.16	-0.364	4.37
2/25/2013	1:02:00	14.708	14.474	0.234	0.540	2.16	-0.360	4.32
2/25/2013	1:17:00	14.712	14.471	0.241	0.556	2.16	-0.376	4.51
2/25/2013	1:32:00	14.707	14.467	0.240	0.554	2.16	-0.374	4.48
2/25/2013	1:47:00	14.712	14.469	0.243	0.561	2.16	-0.381	4.57
2/25/2013	2:02:00	14.716	14.466	0.250	0.577	2.16	-0.397	4.76
2/25/2013	2:17:00	14.715	14.470	0.245	0.565	2.16	-0.385	4.62
2/25/2013	2:32:00	14.710	14.473	0.237	0.547	2.16	-0.367	4.40
2/25/2013	2:47:00	14.705	14.473	0.232	0.535	2.16	-0.355	4.26
2/25/2013	3:02:00	14.709	14.471	0.238	0.549	2.16	-0.369	4.43
2/25/2013	3:17:00	14.707	14.472	0.235	0.542	2.16	-0.362	4.35
2/25/2013	3:32:00	14.704	14.479	0.225	0.519	2.16	-0.339	4.07
2/25/2013	3:47:00	14.712	14.482	0.230	0.531	2.16	-0.351	4.21
2/25/2013	4:02:00	14.709	14.482	0.227	0.524	2.16	-0.344	4.12
2/25/2013	4:17:00	14.713	14.486	0.227	0.524	2.16	-0.344	4.12
2/25/2013	4:32:00	14.716	14.484	0.232	0.535	2.16	-0.355	4.26
2/25/2013	4:47:00	14.721	14.490	0.231	0.533	2.16	-0.353	4.24
2/25/2013	5:02:00	14.721	14.493	0.228	0.526	2.16	-0.346	4.15
2/25/2013	5:17:00	14.722	14.496	0.226	0.521	2.16	-0.341	4.10
2/25/2013	5:32:00	14.723	14.497	0.226	0.521	2.16	-0.341	4.10
2/25/2013	5:47:00	14.724	14.502	0.222	0.512	2.16	-0.332	3.99
2/25/2013	6:02:00	14.730	14.501	0.229	0.528	2.16	-0.348	4.18
2/25/2013	6:17:00	14.733	14.512	0.221	0.510	2.16	-0.330	3.96
2/25/2013	6:32:00	14.731	14.513	0.218	0.503	2.16	-0.323	3.88
2/25/2013	6:47:00	14.731	14.521	0.210	0.484	2.16	-0.304	3.65
2/25/2013	7:02:00	14.730	14.527	0.203	0.468	2.16	-0.288	3.46
2/25/2013	7:17:00	14.737	14.525	0.212	0.489	2.16	-0.309	3.71
2/25/2013	7:32:00	14.742	14.530	0.212	0.489	2.16	-0.309	3.71
2/25/2013	7:47:00	14.755	14.538	0.217	0.501	2.16	-0.321	3.85
2/25/2013	8:02:00	14.756	14.533	0.223	0.514	2.16	-0.334	4.01
2/25/2013	8:17:00	14.761	14.543	0.218	0.503	2.16	-0.323	3.88
2/25/2013	8:32:00	14.757	14.538	0.219	0.505	2.16	-0.325	3.90
2/25/2013	8:47:00	14.766	14.548	0.218	0.503	2.16	-0.323	3.88
2/25/2013	9:02:00	14.765	14.545	0.220	0.508	2.16	-0.328	3.93
2/25/2013	9:17:00	14.771	14.539	0.232	0.535	2.16	-0.355	4.26
2/25/2013	9:32:00	14.768	14.540	0.228	0.526	2.16	-0.346	4.15
2/25/2013	9:47:00	14.776	14.538	0.238	0.549	2.16	-0.369	4.43
2/25/2013	10:02:00	14.781	14.535	0.246	0.568	2.16	-0.388	4.65
2/25/2013	10:17:00	14.772	14.535	0.237	0.547	2.16	-0.367	4.40
2/25/2013	10:32:00	14.775	14.529	0.246	0.568	2.16	-0.388	4.65
2/25/2013	10:47:00	14.774	14.534	0.240	0.554	2.16	-0.374	4.48
2/25/2013	11:02:00	14.770	14.531	0.239	0.551	2.16	-0.371	4.46
2/25/2013	11:17:00	14.773	14.525	0.248	0.572	2.16	-0.392	4.71
2/25/2013	11:32:00	14.767	14.530	0.237	0.547	2.16	-0.367	4.40
2/25/2013	11:47:00	14.763	14.524	0.239	0.551	2.16	-0.371	4.46
2/25/2013	12:02:00	14.764	14.522	0.242	0.558	2.16	-0.378	4.54
2/25/2013	12:17:00	14.758	14.516	0.242	0.558	2.16	-0.378	4.54
2/25/2013	12:32:00	14.754	14.516	0.238	0.549	2.16	-0.369	4.43
2/25/2013	12:47:00	14.751	14.510	0.241	0.556	2.16	-0.376	4.51
2/25/2013	13:02:00	14.753	14.515	0.238	0.549	2.16	-0.369	4.43
2/25/2013	13:17:00	14.749	14.507	0.242	0.558	2.16	-0.378	4.54
2/25/2013	13:32:00	14.745	14.511	0.234	0.540	2.16	-0.360	4.32
2/25/2013	13:47:00	14.744	14.507	0.237	0.547	2.16	-0.367	4.40
2/25/2013	14:02:00	14.741	14.505	0.236	0.544	2.16	-0.364	4.37
2/25/2013	14:17:00	14.737	14.505	0.232	0.535	2.16	-0.355	4.26
2/25/2013	14:32:00	14.741	14.503	0.238	0.549	2.16	-0.369	4.43
2/25/2013	14:47:00	14.737	14.497	0.240	0.554	2.16	-0.374	4.48
2/25/2013	15:02:00	14.738	14.498	0.240	0.554	2.16	-0.374	4.48
2/25/2013	15:17:00	14.732	14.499	0.233	0.538	2.16	-0.358	4.29
2/25/2013	15:32:00	14.730	14.499	0.231	0.533	2.16	-0.353	4.24
2/25/2013	15:47:00	14.727	14.505	0.222	0.512	2.16	-0.332	3.99
2/25/2013	16:02:00	14.725	14.506	0.219	0.505	2.16	-0.325	3.90
2/25/2013	16:17:00	14.728	14.490	0.238	0.549	2.16	-0.369	4.43
2/25/2013	16:32:00	14.733	14.514	0.219	0.505	2.16	-0.325	3.90
2/25/2013	16:47:00	14.724	14.514	0.210	0.484	2.16	-0.304	3.65
2/25/2013	17:02:00	14.727	14.508	0.219	0.505	2.16	-0.325	3.90
2/25/2013	17:17:00	14.724	14.502	0.222	0.512	2.16	-0.332	3.99
2/25/2013	17:32:00	14.727	14.508	0.219	0.505	2.16	-0.325	3.90
2/25/2013	17:47:00	14.726	14.513	0.213	0.491	2.16	-0.311	3.74
2/25/2013	18:02:00	14.729	14.505	0.224	0.517	2.16	-0.337	4.04
2/25/2013	18:17:00	14.733	14.505	0.228	0.526	2.16	-0.346	4.15
2/25/2013	18:32:00	14.733	14.508	0.225	0.519	2.16	-0.339	4.07
2/25/2013	18:47:00	14.733	14.507	0.226	0.521	2.16	-0.341	4.10
2/25/2013	19:02:00	14.728	14.511	0.217	0.501	2.16	-0.321	3.85
2/25/2013	19:17:00	14.735	14.506	0.229	0.528	2.16	-0.348	4.18
2/25/2013	19:32:00	14.732	14.511	0.221	0.510	2.16	-0.330	3.96
2/25/2013	19:47:00	14.731	14.508	0.223	0.514	2.16	-0.334	4.01
2/25/2013	20:02:00	14.727	14.506	0.221	0.510	2.16	-0.330	3.96
2/25/2013	20:17:00	14.729	14.511	0.218	0.503	2.16	-0.323	3.88
2/25/2013	20:32:00	14.731	14.514	0.217	0.501	2.16	-0.321	3.85
2/25/2013	20:47:00	14.732	14.511	0.221	0.510	2.16	-0.330	3.96
2/25/2013	21:02:00	14.732	14.504	0.228	0.526	2.16	-0.346	4.15
2/25/2013	21:17:00	14.727	14.498	0.229	0.528	2.16	-0.348	4.18
2/25/2013	21:32:00	14.728	14.490	0.238	0.549	2.16	-0.369	4.43
2/25/2013	21:47:00	14.726	14.490	0.236	0.544	2.16	-0.364	4.37
2/25/2013	22:02:00	14.724	14.494	0.230	0.531	2.16	-0.351	4.21
2/25/2013	22:17:00	14.720	14.490	0.230	0.531	2.16	-0.351	4.21
2/25/2013	22:32:00	14.717	14.487	0.230	0.531	2.16	-0.351	4.21
2/25/2013	22:47:00	14.713	14.487	0.226	0.521	2.16	-0.341	4.10
2/25/2013	23:02:00	14.713	14.485	0.228	0.526	2.16	-0.346	4.15
2/25/2013	23:17:00	14.713	14.484	0.229	0.528	2.16	-0.348	4.18
2/25/2013	23:32:00	14.705	14.482	0.223	0.514	2.16	-0.334	4.01
2/25/2013	23:47:00	14.706	14.481	0.225	0.519	2.16	-0.339	4.07
2/26/2013	0:02:00	14.705	14.471	0.234	0.540	2.16	-0.360	4.32
2/26/2013	0:17:00	14.699	14.478	0.221	0.510	2.16	-0.330	3.96
2/26/2013	0:32:00	14.699	14.473	0.226	0.521	2.16	-0.341	4.10
2/26/2013	0:47:00	14.703	14.477	0.226	0.521	2.16	-0.341	4.10
2/26/2013	1:02:00	14.697	14.472	0.225	0.519	2.16	-0.339	4.07
2/26/2013	1:17:00	14.694	14.468	0.226	0.521	2.16	-0.341	4.10
2/26/2013	1:32:00	14.696	14.459	0.237	0.547	2.16	-0.367	4.40
2/26/2013	1:47:00	14.693	14.456	0.237	0.547	2.16	-0.367	4.40
2/26/2013	2:02:00	14.692	14.450	0.242	0.558	2.16	-0.378	4.54
2/26/2013	2:17:00	14.683	14.439	0.244	0.563	2.16	-0.383	4.59
2/26/2013	2:32:00	14.678	14.438	0.240	0.554	2.16	-0.374	4.48

2/26/2013	2:47:00	14.676	14.435	0.241	0.556	2.16	-0.376	4.51	
2/26/2013	3:02:00	14.670	14.433	0.237	0.547	2.16	-0.367	4.40	
2/26/2013	3:17:00	14.658	14.427	0.231	0.533	2.16	-0.353	4.24	
2/26/2013	3:32:00	14.657	14.430	0.227	0.524	2.16	-0.344	4.12	
2/26/2013	3:47:00	14.657	14.423	0.234	0.540	2.16	-0.360	4.32	
2/26/2013	4:02:00	14.648	14.420	0.228	0.526	2.16	-0.346	4.15	0.01
2/26/2013	4:17:00	14.647	14.430	0.217	0.501	2.16	-0.321	3.85	0.03
2/26/2013	4:32:00	14.645	14.431	0.214	0.494	2.16	-0.314	3.76	0.04
2/26/2013	4:47:00	14.645	14.429	0.216	0.498	2.16	-0.318	3.82	0.07
2/26/2013	5:02:00	14.646	14.427	0.219	0.505	2.16	-0.325	3.90	
2/26/2013	5:17:00	14.654	14.421	0.233	0.538	2.16	-0.358	4.29	0.09
2/26/2013	5:32:00	14.670	14.410	0.260	0.600	2.16	-0.420	5.04	0.11
2/26/2013	5:47:00	14.673	14.405	0.268	0.618	2.16	-0.438	5.26	0.12
2/26/2013	6:02:00	14.676	14.401	0.275	0.634	2.16	-0.454	5.45	0.17
2/26/2013	6:17:00	14.690	14.395	0.295	0.681	2.16	-0.501	6.01	0.21
2/26/2013	6:32:00	14.702	14.398	0.304	0.701	2.16	-0.521	6.26	0.23
2/26/2013	6:47:00	14.731	14.402	0.329	0.759	2.16	-0.579	6.95	0.26
2/26/2013	7:02:00	14.763	14.398	0.365	0.842	2.16	-0.662	7.94	0.27
2/26/2013	7:17:00	14.776	14.389	0.387	0.893	2.16	-0.713	8.55	0.28
2/26/2013	7:32:00	14.794	14.383	0.411	0.948	2.16	-0.768	9.22	0.32
2/26/2013	7:47:00	14.813	14.376	0.437	1.008	2.16	-0.828	9.94	0.34
2/26/2013	8:02:00	14.830	14.377	0.453	1.045	2.16	-0.865	10.38	0.36
2/26/2013	8:17:00	14.876	14.371	0.505	1.165	2.16	-0.985	11.82	0.42
2/26/2013	8:32:00	14.948	14.363	0.585	1.350	2.16	-1.170	14.04	0.46
2/26/2013	8:47:00	15.032	14.358	0.674	1.555	2.16	-1.375	16.50	0.50
2/26/2013	9:02:00	15.068	14.356	0.712	1.643	2.16	-1.463	17.55	0.51
2/26/2013	9:17:00	15.069	14.358	0.711	1.640	2.16	-1.460	17.52	0.52
2/26/2013	9:32:00	15.042	14.348	0.694	1.601	2.16	-1.421	17.05	0.54
2/26/2013	9:47:00	15.009	14.344	0.665	1.534	2.16	-1.354	16.25	0.56
2/26/2013	10:02:00	14.999	14.338	0.661	1.525	2.16	-1.345	16.14	0.58
2/26/2013	10:17:00	15.022	14.324	0.698	1.610	2.16	-1.430	17.16	0.61
2/26/2013	10:32:00	15.018	14.329	0.689	1.590	2.16	-1.410	16.91	0.63
2/26/2013	10:47:00	15.011	14.307	0.704	1.624	2.16	-1.444	17.33	
2/26/2013	11:02:00	15.018	14.305	0.713	1.645	2.16	-1.465	17.58	
2/26/2013	11:17:00	14.998	14.301	0.697	1.608	2.16	-1.428	17.14	0.64
2/26/2013	11:32:00	14.974	14.294	0.680	1.569	2.16	-1.389	16.67	0.65
2/26/2013	11:47:00	14.958	14.282	0.676	1.560	2.16	-1.380	16.55	0.67
2/26/2013	12:02:00	14.945	14.274	0.671	1.548	2.16	-1.368	16.42	
2/26/2013	12:17:00	14.927	14.261	0.666	1.536	2.16	-1.356	16.28	
2/26/2013	12:32:00	14.925	14.257	0.668	1.541	2.16	-1.361	16.33	
2/26/2013	12:47:00	14.911	14.251	0.660	1.523	2.16	-1.343	16.11	
2/26/2013	13:02:00	14.895	14.258	0.637	1.470	2.16	-1.290	15.47	0.68
2/26/2013	13:17:00	14.877	14.260	0.617	1.423	2.16	-1.243	14.92	
2/26/2013	13:32:00	14.865	14.247	0.618	1.426	2.16	-1.246	14.95	
2/26/2013	13:47:00	14.851	14.246	0.605	1.396	2.16	-1.216	14.59	
2/26/2013	14:02:00	14.842	14.242	0.600	1.384	2.16	-1.204	14.45	
2/26/2013	14:17:00	14.844	14.237	0.607	1.400	2.16	-1.220	14.64	0.70
2/26/2013	14:32:00	14.842	14.236	0.606	1.398	2.16	-1.218	14.62	0.74
2/26/2013	14:47:00	14.842	14.237	0.605	1.396	2.16	-1.216	14.59	0.77
2/26/2013	15:02:00	14.827	14.241	0.586	1.352	2.16	-1.172	14.06	
2/26/2013	15:17:00	14.815	14.243	0.572	1.320	2.16	-1.140	13.68	
2/26/2013	15:32:00	14.812	14.241	0.571	1.317	2.16	-1.137	13.65	
2/26/2013	15:47:00	14.797	14.242	0.555	1.280	2.16	-1.100	13.20	
2/26/2013	16:02:00	14.793	14.250	0.543	1.253	2.16	-1.073	12.87	
2/26/2013	16:17:00	14.791	14.251	0.540	1.246	2.16	-1.066	12.79	
2/26/2013	16:32:00	14.784	14.258	0.526	1.213	2.16	-1.033	12.40	
2/26/2013	16:47:00	14.785	14.258	0.527	1.216	2.16	-1.036	12.43	
2/26/2013	17:02:00	14.780	14.257	0.523	1.207	2.16	-1.027	12.32	
2/26/2013	17:17:00	14.779	14.256	0.523	1.207	2.16	-1.027	12.32	
2/26/2013	17:32:00	14.773	14.267	0.506	1.167	2.16	-0.987	11.85	
2/26/2013	17:47:00	14.767	14.259	0.508	1.172	2.16	-0.992	11.90	
2/26/2013	18:02:00	14.767	14.268	0.499	1.151	2.16	-0.971	11.65	
2/26/2013	18:17:00	14.760	14.278	0.482	1.112	2.16	-0.932	11.18	
2/26/2013	18:32:00	14.758	14.277	0.481	1.110	2.16	-0.930	11.16	
2/26/2013	18:47:00	14.757	14.277	0.480	1.107	2.16	-0.927	11.13	
2/26/2013	19:02:00	14.751	14.280	0.471	1.087	2.16	-0.907	10.88	
2/26/2013	19:17:00	14.745	14.288	0.457	1.054	2.16	-0.874	10.49	
2/26/2013	19:32:00	14.754	14.291	0.463	1.068	2.16	-0.888	10.66	
2/26/2013	19:47:00	14.756	14.292	0.464	1.070	2.16	-0.890	10.69	
2/26/2013	20:02:00	14.751	14.296	0.455	1.050	2.16	-0.870	10.44	
2/26/2013	20:17:00	14.746	14.296	0.450	1.038	2.16	-0.858	10.30	
2/26/2013	20:32:00	14.747	14.295	0.452	1.043	2.16	-0.863	10.35	
2/26/2013	20:47:00	14.744	14.293	0.451	1.040	2.16	-0.860	10.33	
2/26/2013	21:02:00	14.738	14.295	0.443	1.022	2.16	-0.842	10.10	
2/26/2013	21:17:00	14.734	14.290	0.444	1.024	2.16	-0.844	10.13	
2/26/2013	21:32:00	14.728	14.297	0.431	0.994	2.16	-0.814	9.77	
2/26/2013	21:47:00	14.726	14.302	0.424	0.978	2.16	-0.798	9.58	
2/26/2013	22:02:00	14.721	14.299	0.422	0.974	2.16	-0.794	9.52	
2/26/2013	22:17:00	14.706	14.300	0.406	0.937	2.16	-0.757	9.08	
2/26/2013	22:32:00	14.703	14.301	0.402	0.927	2.16	-0.747	8.97	
2/26/2013	22:47:00	14.706	14.303	0.403	0.930	2.16	-0.750	9.00	
2/26/2013	23:02:00	14.700	14.301	0.399	0.920	2.16	-0.740	8.89	
2/26/2013	23:17:00	14.700	14.306	0.394	0.909	2.16	-0.729	8.75	
2/26/2013	23:32:00	14.697	14.305	0.392	0.904	2.16	-0.724	8.69	
2/26/2013	23:47:00	14.693	14.308	0.385	0.888	2.16	-0.708	8.50	
2/27/2013	0:02:00	14.697	14.307	0.390	0.900	2.16	-0.720	8.64	
2/27/2013	0:17:00	14.698	14.308	0.390	0.900	2.16	-0.720	8.64	
2/27/2013	0:32:00	14.692	14.309	0.383	0.884	2.16	-0.704	8.44	
2/27/2013	0:47:00	14.696	14.302	0.394	0.909	2.16	-0.729	8.75	
2/27/2013	1:02:00	14.690	14.308	0.382	0.881	2.16	-0.701	8.42	
2/27/2013	1:17:00	14.696	14.298	0.398	0.918	2.16	-0.738	8.86	
2/27/2013	1:32:00	14.682	14.298	0.384	0.886	2.16	-0.706	8.47	
2/27/2013	1:47:00	14.669	14.296	0.373	0.861	2.16	-0.681	8.17	
2/27/2013	2:02:00	14.664	14.298	0.366	0.844	2.16	-0.664	7.97	
2/27/2013	2:17:00	14.660	14.300	0.360	0.831	2.16	-0.651	7.81	
2/27/2013	2:32:00	14.668	14.302	0.366	0.844	2.16	-0.664	7.97	
2/27/2013	2:47:00	14.653	14.300	0.353	0.814	2.16	-0.634	7.61	
2/27/2013	3:02:00	14.659	14.303	0.356	0.821	2.16	-0.641	7.70	
2/27/2013	3:17:00	14.658	14.307	0.351	0.810	2.16	-0.630	7.56	
2/27/2013	3:32:00	14.657	14.312	0.345	0.796	2.16	-0.616	7.39	
2/27/2013	3:47:00	14.651	14.317	0.334	0.771	2.16	-0.591	7.09	
2/27/2013	4:02:00	14.658	14.319	0.339	0.782	2.16	-0.602	7.22	
2/27/2013	4:17:00	14.660	14.319	0.341	0.787	2.16	-0.607	7.28	
2/27/2013	4:32:00	14.664	14.325	0.339	0.782	2.16	-0.602	7.22	
2/27/2013	4:47:00	14.663	14.328	0.335	0.773	2.16	-0.593	7.11	
2/27/2013	5:02:00	14.665	14.328	0.337	0.777	2.16	-0.597	7.17	
2/27/2013	5:17:00	14.669	14.331	0.338	0.780	2.16	-0.600	7.20	
2/27/2013	5:32:00	14.671	14.335	0.336	0.775	2.16	-0.595	7.14	
2/27/2013	5:47:00	14.672	14.338	0.334	0.771	2.16	-0.591	7.09	
2/27/2013	6:02:00	14.671	14.345	0.326	0.752	2.16	-0.572	6.86	
2/27/2013	6:17:00	14.667	14.347	0.320	0.738	2.16	-0.558	6.70	
2/27/2013	6:32:00	14.673	14.344	0.329	0.759	2.16	-0.579	6.95	
2/27/2013	6:47:00	14.667	14.349	0.318	0.734	2.16	-0.554	6.64	
2/27/2013	7:02:00	14.665	14.355	0.310	0.715	2.16	-0.535	6.42	
2/27/2013	7:17:00	14.669	14.354	0.315	0.727	2.16	-0.547	6.56	
2/27/2013	7:32:00	14.669	14.360	0.309	0.713	2.16	-0.533	6.39	
2/27/2013	7:47:00	14.669	14.366	0.303	0.699	2.16	-0.519	6.23	
2/27/2013	8:02:00	14.676	14.367	0.309	0.713	2.16	-0.533	6.39	
2/27/2013	8:17:00	14.679	14.363	0.316	0.729	2.16	-0.549	6.59	
2/27/2013	8:32:00	14.677	14.373	0.304	0.701	2.16	-0.521	6.26	
2/27/2013	8:47:00	14.680	14.372	0.308	0.711	2.16	-0.531	6.37	
2/27/2013	9:02:00	14.684	14.369	0.315	0.727	2.16	-0.547	6.56	
2/27/2013	9:17:00	14.684	14.370	0.314	0.724	2.16	-0.544	6.53	
2/27/2013	9:32:00	14.693	14.363	0.330	0.761	2.16	-0.581	6.98	
2/27/2013	9:47:00	14.689	14.368	0.321	0.741	2.16	-0.561	6.73	
2/27/2013	10:02:00	14.685	14.370	0.315	0.727	2.16	-0.547	6.56	
2/27/2013	10:17:00	14.682	14.368	0.314	0.724	2.16	-0.544	6.53	
2/27/2013	10:32:00	14.677	14.369	0.308	0.711	2.16	-0.531	6.37	
2/27/2013	10:47:00	14.674	14.368	0.306	0.706	2.16	-0.526	6.31	
2/27/2013	11:02:00	14.673	14.362	0.311	0.717	2.16	-0.537	6.45	
2/27/2013	11:17:00	14.675	14.355	0.320	0.738	2.16	-0.558	6.70	
2/27/2013	11:32:00	14.681	14.361	0.320	0.738	2.16	-0.558	6.70	
2/27/2013	11:47:00	14.670	14.357	0.313	0.722	2.16	-0.542	6.51	

2/27/2013	12:02:00	14.670	14.358	0.312	0.720	2.16	-0.540	6.48
2/27/2013	12:17:00	14.659	14.352	0.307	0.708	2.16	-0.528	6.34
2/27/2013	12:32:00	14.661	14.352	0.309	0.713	2.16	-0.533	6.39
2/27/2013	12:47:00	14.656	14.350	0.306	0.706	2.16	-0.526	6.31
2/27/2013	13:02:00	14.658	14.351	0.307	0.708	2.16	-0.528	6.34
2/27/2013	13:17:00	14.649	14.346	0.303	0.699	2.16	-0.519	6.23
2/27/2013	13:32:00	14.649	14.351	0.298	0.687	2.16	-0.507	6.09
2/27/2013	13:47:00	14.647	14.351	0.296	0.683	2.16	-0.503	6.03
2/27/2013	14:02:00	14.645	14.341	0.304	0.701	2.16	-0.521	6.26
2/27/2013	14:17:00	14.641	14.341	0.300	0.692	2.16	-0.512	6.15
2/27/2013	14:32:00	14.641	14.336	0.305	0.704	2.16	-0.524	6.28
2/27/2013	14:47:00	14.639	14.332	0.307	0.708	2.16	-0.528	6.34
2/27/2013	15:02:00	14.630	14.336	0.294	0.678	2.16	-0.498	5.98
2/27/2013	15:17:00	14.632	14.334	0.298	0.687	2.16	-0.507	6.09
2/27/2013	15:32:00	14.626	14.338	0.288	0.664	2.16	-0.484	5.81
2/27/2013	15:47:00	14.621	14.335	0.286	0.660	2.16	-0.480	5.76
2/27/2013	16:02:00	14.617	14.337	0.280	0.646	2.16	-0.466	5.59
2/27/2013	16:17:00	14.622	14.332	0.290	0.669	2.16	-0.489	5.87
2/27/2013	16:32:00	14.617	14.334	0.283	0.653	2.16	-0.473	5.67
2/27/2013	16:47:00	14.617	14.334	0.283	0.653	2.16	-0.473	5.67
2/27/2013	17:02:00	14.611	14.335	0.276	0.637	2.16	-0.457	5.48
2/27/2013	17:17:00	14.617	14.331	0.286	0.660	2.16	-0.480	5.76
2/27/2013	17:32:00	14.617	14.336	0.281	0.648	2.16	-0.468	5.62
2/27/2013	17:47:00	14.616	14.339	0.277	0.639	2.16	-0.459	5.51
2/27/2013	18:02:00	14.614	14.337	0.277	0.639	2.16	-0.459	5.51
2/27/2013	18:17:00	14.613	14.335	0.278	0.641	2.16	-0.461	5.54
2/27/2013	18:32:00	14.614	14.349	0.265	0.611	2.16	-0.431	5.18
2/27/2013	18:47:00	14.616	14.339	0.277	0.639	2.16	-0.459	5.51
2/27/2013	19:02:00	14.617	14.339	0.278	0.641	2.16	-0.461	5.54
2/27/2013	19:17:00	14.614	14.334	0.280	0.646	2.16	-0.466	5.59
2/27/2013	19:32:00	14.609	14.335	0.274	0.632	2.16	-0.452	5.43
2/27/2013	19:47:00	14.611	14.335	0.276	0.637	2.16	-0.457	5.48
2/27/2013	20:02:00	14.614	14.335	0.279	0.644	2.16	-0.464	5.56
2/27/2013	20:17:00	14.608	14.335	0.273	0.630	2.16	-0.450	5.40
2/27/2013	20:32:00	14.613	14.337	0.276	0.637	2.16	-0.457	5.48
2/27/2013	20:47:00	14.601	14.327	0.274	0.632	2.16	-0.452	5.43
2/27/2013	21:02:00	14.610	14.334	0.276	0.637	2.16	-0.457	5.48
2/27/2013	21:17:00	14.608	14.331	0.277	0.639	2.16	-0.459	5.51
2/27/2013	21:32:00	14.607	14.335	0.272	0.628	2.16	-0.448	5.37
2/27/2013	21:47:00	14.602	14.335	0.267	0.616	2.16	-0.436	5.23
2/27/2013	22:02:00	14.608	14.333	0.275	0.634	2.16	-0.454	5.45
2/27/2013	22:17:00	14.604	14.335	0.269	0.621	2.16	-0.441	5.29
2/27/2013	22:32:00	14.604	14.329	0.275	0.634	2.16	-0.454	5.45
2/27/2013	22:47:00	14.604	14.332	0.272	0.628	2.16	-0.448	5.37
2/27/2013	23:02:00	14.599	14.329	0.270	0.623	2.16	-0.443	5.31
2/27/2013	23:17:00	14.599	14.330	0.269	0.621	2.16	-0.441	5.29
2/27/2013	23:32:00	14.594	14.335	0.259	0.598	2.16	-0.418	5.01
2/27/2013	23:47:00	14.596	14.329	0.267	0.616	2.16	-0.436	5.23
2/28/2013	0:02:00	14.599	14.332	0.267	0.616	2.16	-0.436	5.23
2/28/2013	0:17:00	14.594	14.328	0.266	0.614	2.16	-0.434	5.20
2/28/2013	0:32:00	14.592	14.338	0.254	0.586	2.16	-0.406	4.87
2/28/2013	0:47:00	14.588	14.335	0.253	0.584	2.16	-0.404	4.84
2/28/2013	1:02:00	14.590	14.329	0.261	0.602	2.16	-0.422	5.07
2/28/2013	1:17:00	14.591	14.333	0.258	0.595	2.16	-0.415	4.98
2/28/2013	1:32:00	14.596	14.325	0.271	0.625	2.16	-0.445	5.34
2/28/2013	1:47:00	14.595	14.329	0.266	0.614	2.16	-0.434	5.20
2/28/2013	2:02:00	14.589	14.323	0.266	0.614	2.16	-0.434	5.20
2/28/2013	2:17:00	14.588	14.325	0.263	0.607	2.16	-0.427	5.12
2/28/2013	2:32:00	14.589	14.328	0.261	0.602	2.16	-0.422	5.07
2/28/2013	2:47:00	14.584	14.327	0.257	0.593	2.16	-0.413	4.95
2/28/2013	3:02:00	14.586	14.333	0.253	0.584	2.16	-0.404	4.84
2/28/2013	3:17:00	14.588	14.331	0.257	0.593	2.16	-0.413	4.95
2/28/2013	3:32:00	14.584	14.332	0.252	0.581	2.16	-0.401	4.82
2/28/2013	3:47:00	14.584	14.337	0.247	0.570	2.16	-0.390	4.68
2/28/2013	4:02:00	14.582	14.335	0.247	0.570	2.16	-0.390	4.68
2/28/2013	4:17:00	14.587	14.338	0.249	0.574	2.16	-0.394	4.73
2/28/2013	4:32:00	14.581	14.332	0.249	0.574	2.16	-0.394	4.73
2/28/2013	4:47:00	14.584	14.334	0.250	0.577	2.16	-0.397	4.76
2/28/2013	5:02:00	14.588	14.341	0.247	0.570	2.16	-0.390	4.68
2/28/2013	5:17:00	14.589	14.342	0.247	0.570	2.16	-0.390	4.68
2/28/2013	5:32:00	14.581	14.349	0.232	0.535	2.16	-0.355	4.26
2/28/2013	5:47:00	14.586	14.344	0.242	0.558	2.16	-0.378	4.54
2/28/2013	6:02:00	14.587	14.350	0.237	0.547	2.16	-0.367	4.40
2/28/2013	6:17:00	14.588	14.344	0.244	0.563	2.16	-0.383	4.59
2/28/2013	6:32:00	14.589	14.346	0.243	0.561	2.16	-0.381	4.57
2/28/2013	6:47:00	14.591	14.353	0.238	0.549	2.16	-0.369	4.43
2/28/2013	7:02:00	14.595	14.353	0.242	0.558	2.16	-0.378	4.54
2/28/2013	7:17:00	14.595	14.354	0.241	0.556	2.16	-0.376	4.51
2/28/2013	7:32:00	14.591	14.359	0.232	0.535	2.16	-0.355	4.26
2/28/2013	7:47:00	14.600	14.359	0.241	0.556	2.16	-0.376	4.51
2/28/2013	8:02:00	14.603	14.354	0.249	0.574	2.16	-0.394	4.73
2/28/2013	8:17:00	14.608	14.360	0.248	0.572	2.16	-0.392	4.71
2/28/2013	8:32:00	14.608	14.361	0.247	0.570	2.16	-0.390	4.68
2/28/2013	8:47:00	14.603	14.357	0.246	0.568	2.16	-0.388	4.65
2/28/2013	9:02:00	14.605	14.360	0.245	0.565	2.16	-0.385	4.62
2/28/2013	9:17:00	14.611	14.360	0.251	0.579	2.16	-0.399	4.79
2/28/2013	9:32:00	14.611	14.359	0.252	0.581	2.16	-0.401	4.82
2/28/2013	9:47:00	14.608	14.358	0.250	0.577	2.16	-0.397	4.76
2/28/2013	10:02:00	14.606	14.357	0.249	0.574	2.16	-0.394	4.73
2/28/2013	10:17:00	14.606	14.357	0.249	0.574	2.16	-0.394	4.73
2/28/2013	10:32:00	14.609	14.355	0.254	0.586	2.16	-0.406	4.87
2/28/2013	10:47:00	14.611	14.362	0.249	0.574	2.16	-0.394	4.73
2/28/2013	11:02:00	14.611	14.360	0.251	0.579	2.16	-0.399	4.79
2/28/2013	11:17:00	14.605	14.361	0.244	0.563	2.16	-0.383	4.59
2/28/2013	11:32:00	14.612	14.356	0.256	0.591	2.16	-0.411	4.93
2/28/2013	11:47:00	14.606	14.358	0.248	0.572	2.16	-0.392	4.71
2/28/2013	12:02:00	14.606	14.345	0.261	0.602	2.16	-0.422	5.07
2/28/2013	12:17:00	14.609	14.351	0.258	0.595	2.16	-0.415	4.98
2/28/2013	12:32:00	14.607	14.347	0.260	0.600	2.16	-0.420	5.04
2/28/2013	12:47:00	14.606	14.348	0.258	0.595	2.16	-0.415	4.98
2/28/2013	13:02:00	14.600	14.350	0.250	0.577	2.16	-0.397	4.76
2/28/2013	13:17:00	14.596	14.344	0.252	0.581	2.16	-0.401	4.82
2/28/2013	13:32:00	14.597	14.352	0.245	0.565	2.16	-0.385	4.62
2/28/2013	13:47:00	14.596	14.351	0.245	0.565	2.16	-0.385	4.62
2/28/2013	14:02:00	14.595	14.351	0.244	0.563	2.16	-0.383	4.59
2/28/2013	14:17:00	14.598	14.344	0.254	0.586	2.16	-0.406	4.87
2/28/2013	14:32:00	14.598	14.352	0.246	0.568	2.16	-0.388	4.65
2/28/2013	14:47:00	14.594	14.354	0.240	0.554	2.16	-0.374	4.48
2/28/2013	15:02:00	14.591	14.355	0.236	0.544	2.16	-0.364	4.37
2/28/2013	15:17:00	14.596	14.359	0.237	0.547	2.16	-0.367	4.40
2/28/2013	15:32:00	14.594	14.353	0.241	0.556	2.16	-0.376	4.51
2/28/2013	15:47:00	14.596	14.349	0.247	0.570	2.16	-0.390	4.68
2/28/2013	16:02:00	14.593	14.363	0.230	0.531	2.16	-0.351	4.21
2/28/2013	16:17:00	14.598	14.367	0.231	0.533	2.16	-0.353	4.24
2/28/2013	16:32:00	14.601	14.370	0.231	0.533	2.16	-0.353	4.24
2/28/2013	16:47:00	14.600	14.371	0.229	0.528	2.16	-0.348	4.18
2/28/2013	17:02:00	14.599	14.373	0.226	0.521	2.16	-0.341	4.10
2/28/2013	17:17:00	14.600	14.375	0.225	0.519	2.16	-0.339	4.07
2/28/2013	17:32:00	14.605	14.372	0.233	0.538	2.16	-0.358	4.29
2/28/2013	17:47:00	14.610	14.378	0.232	0.535	2.16	-0.355	4.26
2/28/2013	18:02:00	14.614	14.381	0.233	0.538	2.16	-0.358	4.29
2/28/2013	18:17:00	14.612	14.384	0.228	0.526	2.16	-0.346	4.15
2/28/2013	18:32:00	14.614	14.383	0.231	0.533	2.16	-0.353	4.24
2/28/2013	18:47:00	14.613	14.381	0.232	0.535	2.16	-0.355	4.26
2/28/2013	19:02:00	14.618	14.387	0.231	0.533	2.16	-0.353	4.24
2/28/2013	19:17:00	14.620	14.387	0.233	0.538	2.16	-0.358	4.29
2/28/2013	19:32:00	14.624	14.385	0.239	0.551	2.16	-0.371	4.46
2/28/2013	19:47:00	14.622	14.389	0.233	0.538	2.16	-0.358	4.29
2/28/2013	20:02:00	14.619	14.390	0.229	0.528	2.16	-0.348	4.18
2/28/2013	20:17:00	14.622	14.394	0.228	0.526	2.16	-0.346	4.15
2/28/2013	20:32:00	14.619	14.397	0.222	0.512	2.16	-0.332	3.99
2/28/2013	20:47:00	14.622	14.394	0.228	0.526	2.16	-0.346	4.15
2/28/2013	21:02:00	14.623	14.400	0.223	0.514	2.16	-0.334	4.01

2/28/2013	21:17:00	14.625	14.397	0.228	0.526	2.16	-0.346	4.15
2/28/2013	21:32:00	14.628	14.403	0.225	0.519	2.16	-0.339	4.07
2/28/2013	21:47:00	14.634	14.401	0.233	0.538	2.16	-0.358	4.29
2/28/2013	22:02:00	14.632	14.404	0.228	0.526	2.16	-0.346	4.15
2/28/2013	22:17:00	14.631	14.404	0.227	0.524	2.16	-0.344	4.12
2/28/2013	22:32:00	14.630	14.403	0.227	0.524	2.16	-0.344	4.12
2/28/2013	22:47:00	14.633	14.403	0.230	0.531	2.16	-0.351	4.21
2/28/2013	23:02:00	14.631	14.403	0.228	0.526	2.16	-0.346	4.15
2/28/2013	23:17:00	14.636	14.409	0.227	0.524	2.16	-0.344	4.12
2/28/2013	23:32:00	14.630	14.409	0.221	0.510	2.16	-0.330	3.96
2/28/2013	23:47:00	14.638	14.411	0.227	0.524	2.16	-0.344	4.12
3/1/2013	0:02:00	14.629	14.410	0.219	0.505	2.16	-0.325	3.90
3/1/2013	0:17:00	14.631	14.411	0.220	0.508	2.16	-0.328	3.93
3/1/2013	0:32:00	14.643	14.412	0.231	0.533	2.16	-0.353	4.24
3/1/2013	0:47:00	14.638	14.412	0.226	0.521	2.16	-0.341	4.10
3/1/2013	1:02:00	14.641	14.405	0.236	0.544	2.16	-0.364	4.37
3/1/2013	1:17:00	14.633	14.402	0.231	0.533	2.16	-0.353	4.24
3/1/2013	1:32:00	14.636	14.404	0.232	0.535	2.16	-0.355	4.26
3/1/2013	1:47:00	14.637	14.403	0.234	0.540	2.16	-0.360	4.32
3/1/2013	2:02:00	14.634	14.403	0.231	0.533	2.16	-0.353	4.24
3/1/2013	2:17:00	14.631	14.403	0.228	0.526	2.16	-0.346	4.15
3/1/2013	2:32:00	14.630	14.410	0.220	0.508	2.16	-0.328	3.93
3/1/2013	2:47:00	14.633	14.404	0.229	0.528	2.16	-0.348	4.18
3/1/2013	3:02:00	14.631	14.412	0.219	0.505	2.16	-0.325	3.90
3/1/2013	3:17:00	14.625	14.404	0.221	0.510	2.16	-0.330	3.96
3/1/2013	3:32:00	14.631	14.408	0.223	0.514	2.16	-0.334	4.01
3/1/2013	3:47:00	14.631	14.414	0.217	0.501	2.16	-0.321	3.85
3/1/2013	4:02:00	14.628	14.411	0.217	0.501	2.16	-0.321	3.85
3/1/2013	4:17:00	14.634	14.408	0.226	0.521	2.16	-0.341	4.10
3/1/2013	4:32:00	14.631	14.414	0.217	0.501	2.16	-0.321	3.85
3/1/2013	4:47:00	14.630	14.413	0.217	0.501	2.16	-0.321	3.85
3/1/2013	5:02:00	14.634	14.420	0.214	0.494	2.16	-0.314	3.76
3/1/2013	5:17:00	14.637	14.421	0.216	0.498	2.16	-0.318	3.82
3/1/2013	5:32:00	14.639	14.419	0.220	0.508	2.16	-0.328	3.93
3/1/2013	5:47:00	14.638	14.418	0.220	0.508	2.16	-0.328	3.93
3/1/2013	6:02:00	14.636	14.423	0.213	0.491	2.16	-0.311	3.74
3/1/2013	6:17:00	14.642	14.426	0.216	0.498	2.16	-0.318	3.82
3/1/2013	6:32:00	14.641	14.420	0.221	0.510	2.16	-0.330	3.96
3/1/2013	6:47:00	14.638	14.420	0.218	0.503	2.16	-0.323	3.88
3/1/2013	7:02:00	14.643	14.419	0.224	0.517	2.16	-0.337	4.04
3/1/2013	7:17:00	14.640	14.435	0.205	0.473	2.16	-0.293	3.52
3/1/2013	7:32:00	14.646	14.426	0.220	0.508	2.16	-0.328	3.93
3/1/2013	7:47:00	14.642	14.423	0.219	0.505	2.16	-0.325	3.90
3/1/2013	8:02:00	14.648	14.427	0.221	0.510	2.16	-0.330	3.96
3/1/2013	8:17:00	14.641	14.417	0.224	0.517	2.16	-0.337	4.04
3/1/2013	8:32:00	14.643	14.420	0.223	0.514	2.16	-0.334	4.01
3/1/2013	8:47:00	14.648	14.429	0.219	0.505	2.16	-0.325	3.90
3/1/2013	9:02:00	14.646	14.422	0.224	0.517	2.16	-0.337	4.04
3/1/2013	9:17:00	14.649	14.419	0.230	0.531	2.16	-0.351	4.21
3/1/2013	9:32:00	14.641	14.415	0.226	0.521	2.16	-0.341	4.10
3/1/2013	9:47:00	14.646	14.416	0.230	0.531	2.16	-0.351	4.21
3/1/2013	10:02:00	14.650	14.414	0.236	0.544	2.16	-0.364	4.37
3/1/2013	10:17:00	14.641	14.413	0.228	0.526	2.16	-0.346	4.15
3/1/2013	10:32:00	14.648	14.413	0.235	0.542	2.16	-0.362	4.35
3/1/2013	10:47:00	14.644	14.415	0.229	0.528	2.16	-0.348	4.18
3/1/2013	11:02:00	14.645	14.411	0.234	0.540	2.16	-0.360	4.32
3/1/2013	11:17:00	14.641	14.408	0.233	0.538	2.16	-0.358	4.29
3/1/2013	11:32:00	14.642	14.410	0.232	0.535	2.16	-0.355	4.26
3/1/2013	11:47:00	14.643	14.407	0.236	0.544	2.16	-0.364	4.37
3/1/2013	12:02:00	14.639	14.401	0.238	0.549	2.16	-0.369	4.43
3/1/2013	12:17:00	14.637	14.397	0.240	0.554	2.16	-0.374	4.48
3/1/2013	12:32:00	14.634	14.391	0.243	0.561	2.16	-0.381	4.57
3/1/2013	12:47:00	14.633	14.392	0.241	0.556	2.16	-0.376	4.51
3/1/2013	13:02:00	14.626	14.391	0.235	0.542	2.16	-0.362	4.35
3/1/2013	13:17:00	14.625	14.387	0.238	0.549	2.16	-0.369	4.43
3/1/2013	13:32:00	14.625	14.387	0.238	0.549	2.16	-0.369	4.43
3/1/2013	13:47:00	14.623	14.389	0.234	0.540	2.16	-0.360	4.32
3/1/2013	14:02:00	14.616	14.379	0.237	0.547	2.16	-0.367	4.40
3/1/2013	14:17:00	14.614	14.391	0.223	0.514	2.16	-0.334	4.01
3/1/2013	14:32:00	14.616	14.332	0.284	0.655	2.16	-0.475	5.70
3/1/2013	14:47:00	14.598	14.310	0.288	0.664	2.16	-0.484	5.81
3/1/2013	15:02:00	14.420	14.281	0.139	0.321	2.16	-0.141	1.69
3/1/2013	15:17:00	14.420	14.270	0.150	0.346	2.16	-0.166	1.99
3/1/2013	15:32:00	14.389	14.240	0.149	0.344	2.16	-0.164	1.96
3/1/2013	15:47:00	14.358	14.265	0.093	0.215	2.16	-0.035	0.41
3/1/2013	16:02:00	14.318	14.261	0.057	0.131	2.16	0.049	-0.58
3/1/2013	16:17:00	14.317	14.265	0.052	0.120	2.16	0.060	-0.72
3/1/2013	16:32:00	14.342	14.267	0.075	0.173	2.16	0.007	-0.08
3/1/2013	16:47:00	14.316	14.267	0.049	0.113	2.16	0.067	-0.80
3/1/2013	17:02:00	14.296	14.275	0.021	0.048	2.16	0.132	-1.58
3/1/2013	17:17:00	14.312	14.271	0.041	0.095	2.16	0.085	-1.02
3/1/2013	17:32:00	14.315	14.275	0.040	0.092	2.16	0.088	-1.05
3/1/2013	17:47:00	14.312	14.275	0.037	0.085	2.16	0.095	-1.14
3/1/2013	18:02:00	14.305	14.273	0.032	0.074	2.16	0.106	-1.27
3/1/2013	18:17:00	14.311	14.280	0.031	0.072	2.16	0.108	-1.30
3/1/2013	18:32:00	14.311	14.277	0.034	0.078	2.16	0.102	-1.22
3/1/2013	18:47:00	14.314	14.284	0.030	0.069	2.16	0.111	-1.33
3/1/2013	19:02:00	14.312	14.279	0.033	0.076	2.16	0.104	-1.25
3/1/2013	19:17:00	14.311	14.282	0.029	0.067	2.16	0.113	-1.36
3/1/2013	19:32:00	14.312	14.280	0.032	0.074	2.16	0.106	-1.27
3/1/2013	19:47:00	14.320	14.283	0.037	0.085	2.16	0.095	-1.14
3/1/2013	20:02:00	14.315	14.282	0.033	0.076	2.16	0.104	-1.25
3/1/2013	20:17:00	14.313	14.284	0.029	0.067	2.16	0.113	-1.36
3/1/2013	20:32:00	14.317	14.287	0.030	0.069	2.16	0.111	-1.33
3/1/2013	20:47:00	14.317	14.282	0.035	0.081	2.16	0.099	-1.19
3/1/2013	21:02:00	14.316	14.283	0.033	0.076	2.16	0.104	-1.25
3/1/2013	21:17:00	14.322	14.279	0.043	0.099	2.16	0.081	-0.97
3/1/2013	21:32:00	14.321	14.282	0.039	0.090	2.16	0.090	-1.08
3/1/2013	21:47:00	14.321	14.279	0.042	0.097	2.16	0.083	-1.00
3/1/2013	22:02:00	14.315	14.278	0.037	0.085	2.16	0.095	-1.14
3/1/2013	22:17:00	14.313	14.285	0.028	0.065	2.16	0.115	-1.38
3/1/2013	22:32:00	14.319	14.283	0.036	0.083	2.16	0.097	-1.16
3/1/2013	22:47:00	14.315	14.284	0.031	0.072	2.16	0.108	-1.30
3/1/2013	23:02:00	14.318	14.278	0.040	0.092	2.16	0.088	-1.05
3/1/2013	23:17:00	14.319	14.284	0.035	0.081	2.16	0.099	-1.19
3/1/2013	23:32:00	14.315	14.284	0.031	0.072	2.16	0.108	-1.30
3/1/2013	23:47:00	14.313	14.286	0.027	0.062	2.16	0.118	-1.41
3/2/2013	0:02:00	14.317	14.287	0.030	0.069	2.16	0.111	-1.33
3/2/2013	0:17:00	14.318	14.284	0.034	0.078	2.16	0.102	-1.22
3/2/2013	0:32:00	14.314	14.284	0.030	0.069	2.16	0.111	-1.33
3/2/2013	0:47:00	14.321	14.282	0.039	0.090	2.16	0.090	-1.08
3/2/2013	1:02:00	14.317	14.278	0.039	0.090	2.16	0.090	-1.08
3/2/2013	1:17:00	14.311	14.276	0.035	0.081	2.16	0.099	-1.19
3/2/2013	1:32:00	14.315	14.269	0.046	0.106	2.16	0.074	-0.89
3/2/2013	1:47:00	14.313	14.270	0.043	0.099	2.16	0.081	-0.97
3/2/2013	2:02:00	14.313	14.272	0.041	0.095	2.16	0.085	-1.02
3/2/2013	2:17:00	14.311	14.267	0.044	0.102	2.16	0.078	-0.94
3/2/2013	2:32:00	14.307	14.266	0.041	0.095	2.16	0.085	-1.02
3/2/2013	2:47:00	14.304	14.269	0.035	0.081	2.16	0.099	-1.19
3/2/2013	3:02:00	14.303	14.270	0.033	0.076	2.16	0.104	-1.25
3/2/2013	3:17:00	14.301	14.269	0.032	0.074	2.16	0.106	-1.27
3/2/2013	3:32:00	14.298	14.265	0.033	0.076	2.16	0.104	-1.25
3/2/2013	3:47:00	14.299	14.263	0.036	0.083	2.16	0.097	-1.16
3/2/2013	4:02:00	14.304	14.268	0.036	0.083	2.16	0.097	-1.16
3/2/2013	4:17:00	14.302	14.265	0.037	0.085	2.16	0.095	-1.14
3/2/2013	4:32:00	14.301	14.269	0.032	0.074	2.16	0.106	-1.27
3/2/2013	4:47:00	14.297	14.263	0.034	0.078	2.16	0.102	-1.22
3/2/2013	5:02:00	14.299	14.269	0.030	0.069	2.16	0.111	-1.33
3/2/2013	5:17:00	14.300	14.261	0.039	0.090	2.16	0.090	-1.08
3/2/2013	5:32:00	14.301	14.270	0.031	0.072	2.16	0.108	-1.30
3/2/2013	5:47:00	14.305	14.270	0.035	0.081	2.16	0.099	-1.19
3/2/2013	6:02:00	14.305	14.273	0.032	0.074	2.16	0.106	-1.27
3/2/2013	6:17:00	14.307	14.269	0.038	0.088	2.16	0.092	-1.11

3/2/2013	6:32:00	14.302	14.269	0.033	0.076	2.16	0.104	-1.25
3/2/2013	6:47:00	14.301	14.275	0.026	0.060	2.16	0.120	-1.44
3/2/2013	7:02:00	14.298	14.279	0.019	0.044	2.16	0.136	-1.63
3/2/2013	7:17:00	14.309	14.282	0.027	0.062	2.16	0.118	-1.41
3/2/2013	7:32:00	14.315	14.281	0.034	0.078	2.16	0.102	-1.22
3/2/2013	7:47:00	14.314	14.285	0.029	0.067	2.16	0.113	-1.36
3/2/2013	8:02:00	14.318	14.284	0.034	0.078	2.16	0.102	-1.22
3/2/2013	8:17:00	14.313	14.284	0.029	0.067	2.16	0.113	-1.36
3/2/2013	8:32:00	14.319	14.282	0.037	0.085	2.16	0.095	-1.14
3/2/2013	8:47:00	14.316	14.283	0.033	0.076	2.16	0.104	-1.25
3/2/2013	9:02:00	14.316	14.281	0.035	0.081	2.16	0.099	-1.19
3/2/2013	9:17:00	14.314	14.282	0.032	0.074	2.16	0.106	-1.27
3/2/2013	9:32:00	14.318	14.277	0.041	0.095	2.16	0.085	-1.02
3/2/2013	9:47:00	14.320	14.280	0.040	0.092	2.16	0.088	-1.05
3/2/2013	10:02:00	14.322	14.279	0.043	0.099	2.16	0.081	-0.97
3/2/2013	10:17:00	14.320	14.279	0.041	0.095	2.16	0.085	-1.02
3/2/2013	10:32:00	14.322	14.278	0.044	0.102	2.16	0.078	-0.94
3/2/2013	10:47:00	14.319	14.282	0.037	0.085	2.16	0.095	-1.14
3/2/2013	11:02:00	14.321	14.273	0.048	0.111	2.16	0.069	-0.83
3/2/2013	11:17:00	14.318	14.274	0.044	0.102	2.16	0.078	-0.94
3/2/2013	11:32:00	14.312	14.274	0.038	0.088	2.16	0.092	-1.11
3/2/2013	11:47:00	14.315	14.269	0.046	0.106	2.16	0.074	-0.89
3/2/2013	12:02:00	14.316	14.268	0.048	0.111	2.16	0.069	-0.83
3/2/2013	12:17:00	14.311	14.263	0.048	0.111	2.16	0.069	-0.83
3/2/2013	12:32:00	14.315	14.261	0.054	0.125	2.16	0.055	-0.67
3/2/2013	12:47:00	14.306	14.260	0.046	0.106	2.16	0.074	-0.89
3/2/2013	13:02:00	14.304	14.250	0.054	0.125	2.16	0.055	-0.67
3/2/2013	13:17:00	14.302	14.252	0.050	0.115	2.16	0.065	-0.78
3/2/2013	13:32:00	14.296	14.253	0.043	0.099	2.16	0.081	-0.97
3/2/2013	13:47:00	14.296	14.247	0.049	0.113	2.16	0.067	-0.80
3/2/2013	14:02:00	14.288	14.244	0.044	0.102	2.16	0.078	-0.94
3/2/2013	14:17:00	14.289	14.251	0.038	0.088	2.16	0.092	-1.11
3/2/2013	14:32:00	14.286	14.245	0.041	0.095	2.16	0.085	-1.02
3/2/2013	14:47:00	14.282	14.244	0.038	0.088	2.16	0.092	-1.11
3/2/2013	15:02:00	14.281	14.248	0.033	0.076	2.16	0.104	-1.25
3/2/2013	15:17:00	14.284	14.254	0.030	0.069	2.16	0.111	-1.33
3/2/2013	15:32:00	14.283	14.256	0.027	0.062	2.16	0.118	-1.41
3/2/2013	15:47:00	14.280	14.263	0.017	0.039	2.16	0.141	-1.69
3/2/2013	16:02:00	14.284	14.264	0.020	0.046	2.16	0.134	-1.61
3/2/2013	16:17:00	14.291	14.253	0.038	0.088	2.16	0.092	-1.11
3/2/2013	16:32:00	14.296	14.255	0.041	0.095	2.16	0.085	-1.02
3/2/2013	16:47:00	14.295	14.257	0.038	0.088	2.16	0.092	-1.11
3/2/2013	17:02:00	14.299	14.259	0.040	0.092	2.16	0.088	-1.05
3/2/2013	17:17:00	14.298	14.265	0.033	0.076	2.16	0.104	-1.25
3/2/2013	17:32:00	14.295	14.263	0.032	0.074	2.16	0.106	-1.27
3/2/2013	17:47:00	14.293	14.268	0.025	0.058	2.16	0.122	-1.47
3/2/2013	18:02:00	14.292	14.275	0.017	0.039	2.16	0.141	-1.69
3/2/2013	18:17:00	14.291	14.270	0.021	0.048	2.16	0.132	-1.58
3/2/2013	18:32:00	14.301	14.271	0.030	0.069	2.16	0.111	-1.33
3/2/2013	18:47:00	14.300	14.278	0.022	0.051	2.16	0.129	-1.55
3/2/2013	19:02:00	14.306	14.276	0.030	0.069	2.16	0.111	-1.33
3/2/2013	19:17:00	14.303	14.279	0.024	0.055	2.16	0.125	-1.50
3/2/2013	19:32:00	14.311	14.285	0.026	0.060	2.16	0.120	-1.44
3/2/2013	19:47:00	14.315	14.280	0.035	0.081	2.16	0.099	-1.19
3/2/2013	20:02:00	14.316	14.288	0.028	0.065	2.16	0.115	-1.38
3/2/2013	20:17:00	14.319	14.293	0.026	0.060	2.16	0.120	-1.44
3/2/2013	20:32:00	14.317	14.294	0.023	0.053	2.16	0.127	-1.52
3/2/2013	20:47:00	14.320	14.295	0.025	0.058	2.16	0.122	-1.47
3/2/2013	21:02:00	14.323	14.295	0.028	0.065	2.16	0.115	-1.38
3/2/2013	21:17:00	14.324	14.294	0.030	0.069	2.16	0.111	-1.33
3/2/2013	21:32:00	14.330	14.293	0.037	0.085	2.16	0.095	-1.14
3/2/2013	21:47:00	14.327	14.295	0.032	0.074	2.16	0.106	-1.27
3/2/2013	22:02:00	14.333	14.293	0.040	0.092	2.16	0.088	-1.05
3/2/2013	22:17:00	14.329	14.294	0.035	0.081	2.16	0.099	-1.19
3/2/2013	22:32:00	14.332	14.292	0.040	0.092	2.16	0.088	-1.05
3/2/2013	22:47:00	14.332	14.291	0.041	0.095	2.16	0.085	-1.02
3/2/2013	23:02:00	14.333	14.291	0.042	0.097	2.16	0.083	-1.00
3/2/2013	23:17:00	14.333	14.293	0.040	0.092	2.16	0.088	-1.05
3/2/2013	23:32:00	14.336	14.290	0.046	0.106	2.16	0.074	-0.89
3/2/2013	23:47:00	14.328	14.297	0.031	0.072	2.16	0.108	-1.30
3/3/2013	0:02:00	14.329	14.291	0.038	0.088	2.16	0.092	-1.11
3/3/2013	0:17:00	14.333	14.295	0.038	0.088	2.16	0.092	-1.11
3/3/2013	0:32:00	14.328	14.294	0.034	0.078	2.16	0.102	-1.22
3/3/2013	0:47:00	14.330	14.297	0.033	0.076	2.16	0.104	-1.25
3/3/2013	1:02:00	14.329	14.293	0.036	0.083	2.16	0.097	-1.16
3/3/2013	1:17:00	14.337	14.292	0.045	0.104	2.16	0.076	-0.91
3/3/2013	1:32:00	14.334	14.286	0.048	0.111	2.16	0.069	-0.83
3/3/2013	1:47:00	14.336	14.285	0.051	0.118	2.16	0.062	-0.75
3/3/2013	2:02:00	14.335	14.290	0.045	0.104	2.16	0.076	-0.91
3/3/2013	2:17:00	14.335	14.285	0.050	0.115	2.16	0.065	-0.78
3/3/2013	2:32:00	14.327	14.284	0.043	0.099	2.16	0.081	-0.97
3/3/2013	2:47:00	14.327	14.285	0.042	0.097	2.16	0.083	-1.00
3/3/2013	3:02:00	14.326	14.283	0.043	0.099	2.16	0.081	-0.97
3/3/2013	3:17:00	14.326	14.287	0.039	0.090	2.16	0.090	-1.08
3/3/2013	3:32:00	14.328	14.289	0.039	0.090	2.16	0.090	-1.08
3/3/2013	3:47:00	14.323	14.292	0.031	0.072	2.16	0.108	-1.30
3/3/2013	4:02:00	14.323	14.293	0.030	0.069	2.16	0.111	-1.33
3/3/2013	4:17:00	14.329	14.296	0.033	0.076	2.16	0.104	-1.25
3/3/2013	4:32:00	14.332	14.298	0.034	0.078	2.16	0.102	-1.22
3/3/2013	4:47:00	14.332	14.291	0.041	0.095	2.16	0.085	-1.02
3/3/2013	5:02:00	14.335	14.297	0.038	0.088	2.16	0.092	-1.11
3/3/2013	5:17:00	14.334	14.300	0.034	0.078	2.16	0.102	-1.22
3/3/2013	5:32:00	14.336	14.303	0.033	0.076	2.16	0.104	-1.25
3/3/2013	5:47:00	14.337	14.304	0.033	0.076	2.16	0.104	-1.25
3/3/2013	6:02:00	14.336	14.303	0.033	0.076	2.16	0.104	-1.25
3/3/2013	6:17:00	14.339	14.307	0.032	0.074	2.16	0.106	-1.27
3/3/2013	6:32:00	14.341	14.305	0.036	0.083	2.16	0.097	-1.16
3/3/2013	6:47:00	14.343	14.309	0.034	0.078	2.16	0.102	-1.22
3/3/2013	7:02:00	14.348	14.307	0.041	0.095	2.16	0.085	-1.02
3/3/2013	7:17:00	14.348	14.308	0.040	0.092	2.16	0.088	-1.05
3/3/2013	7:32:00	14.345	14.309	0.036	0.083	2.16	0.097	-1.16
3/3/2013	7:47:00	14.350	14.309	0.041	0.095	2.16	0.085	-1.02
3/3/2013	8:02:00	14.354	14.312	0.042	0.097	2.16	0.083	-1.00
3/3/2013	8:17:00	14.357	14.310	0.047	0.108	2.16	0.072	-0.86
3/3/2013	8:32:00	14.350	14.308	0.042	0.097	2.16	0.083	-1.00
3/3/2013	8:47:00	14.351	14.311	0.040	0.092	2.16	0.088	-1.05
3/3/2013	9:02:00	14.350	14.312	0.038	0.088	2.16	0.092	-1.11
3/3/2013	9:17:00	14.355	14.303	0.052	0.120	2.16	0.060	-0.72
3/3/2013	9:32:00	14.359	14.307	0.052	0.120	2.16	0.060	-0.72
3/3/2013	9:47:00	14.359	14.306	0.053	0.122	2.16	0.058	-0.69
3/3/2013	10:02:00	14.354	14.308	0.046	0.106	2.16	0.074	-0.89
3/3/2013	10:17:00	14.356	14.303	0.053	0.122	2.16	0.058	-0.69
3/3/2013	10:32:00	14.350	14.306	0.044	0.102	2.16	0.078	-0.94
3/3/2013	10:47:00	14.349	14.303	0.046	0.106	2.16	0.074	-0.89
3/3/2013	11:02:00	14.347	14.303	0.044	0.102	2.16	0.078	-0.94
3/3/2013	11:17:00	14.347	14.294	0.053	0.122	2.16	0.058	-0.69
3/3/2013	11:32:00	14.345	14.295	0.050	0.115	2.16	0.065	-0.78
3/3/2013	11:47:00	14.345	14.289	0.056	0.129	2.16	0.051	-0.61
3/3/2013	12:02:00	14.344	14.285	0.059	0.136	2.16	0.044	-0.53
3/3/2013	12:17:00	14.338	14.280	0.058	0.134	2.16	0.046	-0.55
3/3/2013	12:32:00	14.345	14.277	0.068	0.157	2.16	0.023	-0.28
3/3/2013	12:47:00	14.332	14.276	0.056	0.129	2.16	0.051	-0.61
3/3/2013	13:02:00	14.328	14.275	0.053	0.122	2.16	0.058	-0.69
3/3/2013	13:17:00	14.329	14.275	0.054	0.125	2.16	0.055	-0.67
3/3/2013	13:32:00	14.325	14.273	0.052	0.120	2.16	0.060	-0.72
3/3/2013	13:47:00	14.319	14.273	0.046	0.106	2.16	0.074	-0.89
3/3/2013	14:02:00	14.313	14.273	0.040	0.092	2.16	0.088	-1.05
3/3/2013	14:17:00	14.315	14.271	0.044	0.102	2.16	0.078	-0.94
3/3/2013	14:32:00	14.315	14.268	0.047	0.108	2.16	0.072	-0.86
3/3/2013	14:47:00	14.315	14.269	0.046	0.106	2.16	0.074	-0.89
3/3/2013	15:02:00	14.315	14.270	0.045	0.104	2.16	0.076	-0.91
3/3/2013	15:17:00	14.311	14.263	0.048	0.111	2.16	0.069	-0.83
3/3/2013	15:32:00	14.312	14.271	0.041	0.095	2.16	0.085	-1.02

3/3/2013	15:47:00	14.310	14.266	0.044	0.102	2.16	0.078	-0.94
3/3/2013	16:02:00	14.315	14.271	0.044	0.102	2.16	0.078	-0.94
3/3/2013	16:17:00	14.310	14.271	0.039	0.090	2.16	0.090	-1.08
3/3/2013	16:32:00	14.308	14.274	0.034	0.078	2.16	0.102	-1.22
3/3/2013	16:47:00	14.312	14.275	0.037	0.085	2.16	0.095	-1.14
3/3/2013	17:02:00	14.309	14.278	0.031	0.072	2.16	0.108	-1.30
3/3/2013	17:17:00	14.313	14.284	0.029	0.067	2.16	0.113	-1.36
3/3/2013	17:32:00	14.312	14.289	0.023	0.053	2.16	0.127	-1.52
3/3/2013	17:47:00	14.316	14.290	0.026	0.060	2.16	0.120	-1.44
3/3/2013	18:02:00	14.317	14.295	0.022	0.051	2.16	0.129	-1.55
3/3/2013	18:17:00	14.322	14.302	0.020	0.046	2.16	0.134	-1.61
3/3/2013	18:32:00	14.322	14.301	0.021	0.048	2.16	0.132	-1.58
3/3/2013	18:47:00	14.330	14.305	0.025	0.058	2.16	0.122	-1.47
3/3/2013	19:02:00	14.333	14.305	0.028	0.065	2.16	0.115	-1.38
3/3/2013	19:17:00	14.335	14.305	0.030	0.069	2.16	0.111	-1.33
3/3/2013	19:32:00	14.341	14.309	0.032	0.074	2.16	0.106	-1.27
3/3/2013	19:47:00	14.344	14.314	0.030	0.069	2.16	0.111	-1.33
3/3/2013	20:02:00	14.345	14.317	0.028	0.065	2.16	0.115	-1.38
3/3/2013	20:17:00	14.346	14.320	0.026	0.060	2.16	0.120	-1.44
3/3/2013	20:32:00	14.352	14.321	0.031	0.072	2.16	0.108	-1.30
3/3/2013	20:47:00	14.350	14.323	0.027	0.062	2.16	0.118	-1.41
3/3/2013	21:02:00	14.357	14.325	0.032	0.074	2.16	0.106	-1.27
3/3/2013	21:17:00	14.358	14.327	0.031	0.072	2.16	0.108	-1.30
3/3/2013	21:32:00	14.361	14.328	0.033	0.076	2.16	0.104	-1.25
3/3/2013	21:47:00	14.365	14.327	0.038	0.088	2.16	0.092	-1.11
3/3/2013	22:02:00	14.365	14.325	0.040	0.092	2.16	0.088	-1.05
3/3/2013	22:17:00	14.361	14.328	0.033	0.076	2.16	0.104	-1.25
3/3/2013	22:32:00	14.362	14.329	0.033	0.076	2.16	0.104	-1.25
3/3/2013	22:47:00	14.364	14.323	0.041	0.095	2.16	0.085	-1.02
3/3/2013	23:02:00	14.361	14.328	0.033	0.076	2.16	0.104	-1.25
3/3/2013	23:17:00	14.362	14.322	0.040	0.092	2.16	0.088	-1.05
3/3/2013	23:32:00	14.366	14.326	0.040	0.092	2.16	0.088	-1.05
3/3/2013	23:47:00	14.365	14.326	0.039	0.090	2.16	0.090	-1.08
3/4/2013	0:02:00	14.367	14.330	0.037	0.085	2.16	0.095	-1.14
3/4/2013	0:17:00	14.366	14.331	0.035	0.081	2.16	0.099	-1.19
3/4/2013	0:32:00	14.365	14.332	0.033	0.076	2.16	0.104	-1.25
3/4/2013	0:47:00	14.364	14.336	0.028	0.065	2.16	0.115	-1.38
3/4/2013	1:02:00	14.370	14.336	0.034	0.078	2.16	0.102	-1.22
3/4/2013	1:17:00	14.372	14.339	0.033	0.076	2.16	0.104	-1.25
3/4/2013	1:32:00	14.372	14.335	0.037	0.085	2.16	0.095	-1.14
3/4/2013	1:47:00	14.372	14.335	0.037	0.085	2.16	0.095	-1.14
3/4/2013	2:02:00	14.377	14.342	0.035	0.081	2.16	0.099	-1.19
3/4/2013	2:17:00	14.374	14.342	0.032	0.074	2.16	0.106	-1.27
3/4/2013	2:32:00	14.379	14.344	0.035	0.081	2.16	0.099	-1.19
3/4/2013	2:47:00	14.380	14.343	0.037	0.085	2.16	0.095	-1.14
3/4/2013	3:02:00	14.378	14.346	0.032	0.074	2.16	0.106	-1.27
3/4/2013	3:17:00	14.374	14.347	0.027	0.062	2.16	0.118	-1.41
3/4/2013	3:32:00	14.378	14.347	0.031	0.072	2.16	0.108	-1.30
3/4/2013	3:47:00	14.384	14.352	0.032	0.074	2.16	0.106	-1.27
3/4/2013	4:02:00	14.383	14.361	0.022	0.051	2.16	0.129	-1.55
3/4/2013	4:17:00	14.385	14.359	0.026	0.060	2.16	0.120	-1.44
3/4/2013	4:32:00	14.389	14.359	0.030	0.069	2.16	0.111	-1.33
3/4/2013	4:47:00	14.394	14.369	0.025	0.058	2.16	0.122	-1.47
3/4/2013	5:02:00	14.397	14.362	0.035	0.081	2.16	0.099	-1.19
3/4/2013	5:17:00	14.400	14.370	0.030	0.069	2.16	0.111	-1.33
3/4/2013	5:32:00	14.401	14.367	0.034	0.078	2.16	0.102	-1.22
3/4/2013	5:47:00	14.399	14.371	0.028	0.065	2.16	0.115	-1.38
3/4/2013	6:02:00	14.399	14.376	0.023	0.053	2.16	0.127	-1.52
3/4/2013	6:17:00	14.408	14.382	0.026	0.060	2.16	0.120	-1.44
3/4/2013	6:32:00	14.408	14.385	0.023	0.053	2.16	0.127	-1.52